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Emerging Viral Diseases: Generation Z's Outlook

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HNRS 4990: Honors Project

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Introduction: Since the advent of mass communication through the internet as well the increase of speed in transportation in the late 20th century, the world has become more globalized than ever due to the continuing development of science. One enemy of the common good, however, proves to still be a great threat to public health: Viral diseases.

From the pandemic of Yersinia Pestis in Europe during the medieval era to the COVID-19 pandemic in the modern day, much has changed that affects how pandemics spread throughout populations. While the interconnectedness and growing population of the world nowadays does not help when it comes to fighting contagious diseases, the great advancements made in medicine (e.g. vaccinations) have more than compensated. Of course, the degree of difficulty to which certain diseases are combatted varies based on the disease. The Zika virus, for example, is an emerging viral disease that is currently prevalent in Latin America and Africa but is barely heard of in the United States. In comparison, COVID-19 is still regularly making headlines in the news more than two years after the first cases in the United States. Another possible factor behind difference in public opinion between the diseases is the method of transmission, as Zika pathogens are sexually transmitted while the Coronavirus is transmitted through fomites. Between the two, the commonality is the public anxiety felt over the diseases in the early stages of outbreaks. Over the course of three surveys designed to survey students regarding their outlook on Zika, COVID-19, and HIV, this project will help to determine how the public can be better prepared for possible viral outbreaks in the future. Furthermore, it will also help to determine how different diseases elicit different responses from the public.

More specifically, this project will focus on Generation Z and how members of this generation differ in their outlook on viral outbreaks and diseases compared to older generations (e.g. Baby Boomers). Clearly, the conditions that members of Generation Z have been raised in are significantly different as a whole compared to the conditions that of generations like Baby Boomers were raised in. The sources of information from which one can learn about emerging diseases near oneself has vastly expanded. Where once one would have to look to the local newspaper or news network on television for information, thousands of different webpages online can give any intrepid browser the ability to research on diseases of most concern to the public (e.g. COVID-19). While this may seem like an overall boon, this widespread availability of information also leaves its users vulnerable towards the spread of dangerous misinformation regarding diseases (e.g. misinformation regarding vaccines). As a result of the rise of the internet, the rise of social media has also been observed especially among the younger generations. As a topic of concern in this project, the surveys will thus analyze how members of Generation Z trust mainstream health organizations like the CDC, where they obtain their information regarding diseases, and how informed they feel regarding the disease they are surveyed about.

Ultimately, this project is an exercise that aims to give more information to health professionals as to how members of the younger generation today can be better informed and prepared for future viral outbreaks. While this generation will be clearly different in how they view diseases compared to older generations, it is likely that certain intergenerational commonalities will be found as well. In the end, the primary question is the following: How do members of Generation Z differ in their outlook on viral diseases compared to previous generations?

Literature Review: While no studies could be found regarding the actual research question asked above, a variety of sources could be found that can be directly related to the established question, such as sources about the defining characteristics of Generation Z or sources summarizing the various diseases that will be surveyed (Zika, HIV, etc.). These sources were found using Google Scholar using search terms that were deemed most relevant to the research question (e.g. “Generation Z and COVID-19”). From there, sources that can be most readily used were chosen from the results and included in the bibliography. Ultimately, all of these sources synthesize to paint a picture of the specific characteristics of Generation Z, the characteristics of the viral diseases being surveyed themselves, relevant behavioral patterns of previous generations such as Baby Boomers, and how viral diseases of various types have already had an effect on Generation Z.

With regards to Generation Z themselves, much research has already been performed regarding the hallmark characteristics of this generational cohort compared to previous generations. Of particular interest is the digital literacy of Generation Z compared to previous generations. While older generations like Millennials were considered “digital pioneers” because of their upbringing during the rise of the internet in the 1990’s and 2000’s, Generation Z has lived with these groundbreaking innovations for nearly their entire lives (Annie E. Casey Foundation, 2021). As noted by organizations like the Annie E. Casey Foundation, this bears the potential of becoming both a boon and a hindrance for Generation Z, as the abundance of information available allows for more opportunities for learning than ever before, but there is no guarantee that the information gained is accurate (Annie E. Casey Foundation, 2021). This delves further into the concept of social media usage among young adults today, a topic of importance that cannot be understated. As reported by the Pew Research Center, the number of

Americans active on social media sites rose from 7% in 2005 to 65% in 2015 (Perrin, 2015).

Considering such a significant surge in the popularity of social media in America as Generation Z grew in age, the influence that social media has on young adults in the modern day and how they gather information is clear. With such a large audience to reach out to, it is no surprise that misinformation has found its way into the presence of social media and spread itself throughout users. Even more disconcertingly is the misinformation spread regarding infectious diseases, as a study from the journal of Social Science and Medicine found that misinformation of this type was the most commonly circulated on social media (Wang, McKee, Torbica, & Stuckler, 2019). With the potential damage infectious diseases can cause to society in numerous aspects, such misinformation targeted at social media users possibly serves to only help the spread of disease. Especially considering the youthful audience often using these platforms, the possibility of Generation Z being even more susceptible to the mishandling of infectious diseases due to misinformation cannot be underestimated. When it comes to the exact reasons behind the prevalence of social media among young adults today, past research has suggested that the primary reasons for this are the ability to easily make new connections with friends, family, and romantic partners through platforms like Snapchat (Kamble, Desai, & Mehendale, 2021). While the online nature of these platforms does indeed make it easier for young adults to connect with friends and partners from anywhere on the planet. However, this also gives another vector for information transmission through word of mouth, as friends, family, and partners can relay information regarding current diseases (such as COVID-19) with the push of a button, possibly miles away from each other. Ultimately, all of the above sources synthesize to give a picture into how the rapid development of technology, the internet, and social media have had both benefits

and downsides when discussing how best to prepare Generation Z for future outbreaks of infectious diseases.

When it comes to the actual diseases being surveyed on for this project, many articles have been published regarding their characteristics, from which possible effects on the public conscience can be implied. To start, COVID 19 has been a pre-eminent topic in the public eye for the past two years due to the ongoing pandemic, and among the reasons for the concern surrounding it is due to the dangerous nature of how the disease is spread. Research has shown that the predominant vector of transmission for the diseases is through both respiratory droplets and physical contact, leading to the very act of touching surfaces or speaking to others a potential risk for contracting COVID-19 (Shi, et al., 2020). Due to the rapid resulting spread of COVID-19 throughout the world as well as how restrictive the guidelines for combatting COVID-19 needed to be in order to nullify this potent vector of transmission, Americans are more likely to be more concerned with the disease as well as more informed due to this concern, compared to the other two diseases which are not as prevalent in the United States as of now (Zika and HIV.) With regards to both Zika and HIV, the route of transmission plays a role in the public's perception of the diseases along with the complications caused by them. The Zika virus itself, for example, is primarily sexually transmitted and thus not as quickly spread. However, it is infamous for also bearing a high risk of causing neurological complications in both newborns and adults, with over 38 cases of Guillain-Barré syndrome being reported in over 28,000 Zika patients in French Polynesia (Petersen, Jamieson, Power, & Honein, 2016). Considering its spread in years past along with its infamous neurological symptoms, Zika is a good example of how the severity of a pathogen can affect public perception around the said pathogen, even if Zika never truly threatened America as HIV and COVID-19 do. Considering HIV, researcher

Joris Hemelaar establishes in his literature review that the difficulty that healthcare organizations have had in treating HIV can be attributed to the high rate of mutation and recombination for the pathogen, which leads to very high genetic diversity and great difficulty in creating effective cures and vaccines for the pathogen (Hemelaar, 2012). In this, the effect a pathogen's very genetic structure can have on how difficult it is to prevent and treat directly leads into how the public might perceive the disease. With the difficulty healthcare organizations have had in attempting to create cures, treatments, and vaccines for HIV along with infamous debacles regarding how healthcare organizations have handled the spread of HIV among the LGBT community, the subsequent mistrust towards organizations regarding their handling of HIV and the fear around contracting the disease is understandable. In the end, these sources synthesize to display how the nature and structure of various pathogens (such as the ones being surveyed about in this project) can affect how the public perceives such diseases, and thus can affect how members of Generation Z might perceive such pathogens as well.

Considering the diseases mentioned prior, it would be amiss to not mention the ways that viral diseases have already affected Generation Z. Firstly, the current COVID 19 pandemic was followed with stay-at-home restrictions in response to the dangerously rapid rate of transmission. In just 3 months after restrictions were instated, a study from Psychiatry Research found that feelings of loneliness among American Adults had increased significantly along with rates of depression and suicidal ideation (Killgore, Cloonan, Taylor, Miller, & Dailey, 2020). Combined with their increasing reliance on the internet and social media for socialization with peers, Generation Z was left in a precarious position during the COVID-19 pandemic where they needed to rely on the internet almost solely for social interaction, which is no substitute for face-to-face interaction for mental health or maintaining social skills. Secondly, not only has COVID-

19 had an effect on the mental well being of Generation Z, it has also bore effects on the consumer behaviors and political outlook of Generation Z. According to a literature review from the Journal of International Consumer Marketing, the advent of the COVID-19 pandemic has caused Generation Z to develop a “stock-up mentality,” “Political discontent,” and an embracement of hedonism (Zwanka & Buff, 2020). With the mass fear that has been spread over the pandemic along with the quarantine instituted in order to limit the spread of the disease, it is easy to see how the COVID pandemic will become the milestone event of this generation, inspiring dissatisfaction with the current political system in young adults along with an incentive to buy food and medical supplies in bulk to prepare for long stretches of isolation at home, as well as an shift towards prioritizing hedonism (“You only live once”) in an age where disease is tearing through society. Especially related to the discontent that Generation Z experiences with regards to the currently established societal system is rates of compliance with guidelines for preventing COVID-19. A multi-national study from the journal of Social Science & Medicine found that when accounting for age, young adults today had lower rates of self-compliance with COVID-19 guidelines than older adults did (Lin, Harris, Heemskerk, Van Bavel, & Ebner, 2021). Naturally, the pandemic has brought such wide reaching consequences to American society that many members of Generation Z may feel as though mainstream public health organizations are not as trustworthy as they should be, thus flouting COVID guidelines as a perceived tool to control people. Another possibility for these lower rates of compliance is a perceived sense of invulnerability to COVID-19, as many young adults may feel as though COVID-19 is a disease that is only dangerous towards older adults who often suffer more severe symptoms from the disease. A source for this distrust towards health organizations from the public and Generation Z can be derived from the delayed response many nations had to the initial

advent of the COVID-19 pandemic as well as the rampant misinformation surrounding the disease, as a source from the Journal of Medical Internet Research has found (Z, et al., 2020). Considering the missed window of opportunity that nations had to prepare their populaces for potential COVID outbreaks as well as a glut of misinformation circulating the internet that shared the same platform with legitimate information, it is easy to see how the public may have difficulty in discerning whether information from health organizations is as reliable as it is thought to be. Not only COVID-19, Generation Z also has been altered by the effects of sexually transmitted viruses such as HIV and Zika. In particular, from a study conducted by researcher Muchimba, young adults were found to have the highest rate of STI's due to factors such as higher rates of risk-taking behaviors (Muchimba, 2019). If sexually transmitted pathogens still continue to plague young adults today due to a propensity for unneeded risk taking, then it stands to reason that such risk taking attitudes (e.g. "You only live once") can possibly serve to hinder the prevention of any future viral outbreak. Ultimately, all of the above sources synthesize to give a picture on how the public and by extension Generation Z has been affected by viral diseases in the present, altering the cultural, economic, and political mindset of this generation for years to come.

Finally, a comparison with previous generations such as Baby Boomers provides an excellent way to determine how the attitudes of young adults today differ from the attitudes of older adults, especially when considering attitudes towards disease. A major difference between Generation Z and previous generations is through methods of learning and how digitization has changed how people gather information. Baby Boomers, having been raised without the internet or any form of digitization, often find using online mediums of learning to be difficult to use and inefficient, as well as simply preferring face-to-face interactions while learning for various

reasons (e.g. usage of non-verbal language) (Puspitasari, et al., 2020). As a result of these difficulties with online learning, Baby Boomers have found it more difficult than members of Generation Z have when it comes to adapting to the unique circumstances imposed by the pandemic. In stark contrast, Generation Z has developed a greater need for “technological integration” in both academic and work environments as well as relying on technology more for problem solving (Marshall & Wolanskyj-Spinner, 2020). Due to this clash of values between two generations, it can be inferred that while Generation Z is much more readily able to inform themselves on viral diseases due to their facility with technology, the reliance on technology has caused an atrophy in socialization compared to previous generations who are less reliant, which leads to more susceptibility to distress caused by such viral outbreaks. When comparing the two generations, Baby Boomers can also be compared to Generation Z on the basis of social media usage. As found in a study from the journal *Heliyon*, Baby Boomers tend to prefer using platforms such as Facebook for the sake of entertainment and diversion, compared to younger adults’ usage of social media as a way to maintain relationships (Sheldon, Antony, & Ware, 2020). Because of this, Baby Boomers continue to display their preference for face-to-face socialization which provides better resiliency compared to the preferred socialization of Generation Z. However, their more casual usage of social media can leave Baby Boomers more susceptible to misinformation than members of Generation Z, as one is far more likely to find misinformation through social media platforms when using them as a means for diversion (e.g. scrolling through one’s facebook feed and seeing articles regarding vaccines) versus using them as a mean of maintaining relationships with others. Ultimately, these three sources all come together to show how far Generation Z has come from generations such as Baby Boomers in digital literacy as well as in ability to educate and inform themselves, but also that such mass

digitization does not come without drawbacks like the loss of face-to-face socialization that Baby Boomers value.

In conclusion, every single one of the above used sources bears relevance to the research question that has been asked. Whether it be comparing Generation Z to previous generations, analyzing how the nature of specific viral diseases may affect the outlook of the public on them, how the internet and social media has shaped how young adults gather information regarding diseases, or even how the culture of Generation Z has already been affected by past viral diseases, all of these articles establish the unique circumstances that young adults today find themselves compared to older adults as well as how this may affect how they would act in response to the outbreak of a viral disease. A key strength of these sources is their diversity. From articles in the realm of economics to biology to sociology, the inclusion of these sources brings interdisciplinarity to this project which thus gives this project a wide variety of perspectives to draw from. However, an unfortunate weakness is the lack of any sources that have attempted to directly answer the research question already asked in this project. As such, this project hopes to fill this gap in the literature by providing insight into how members of Generation Z view different viral diseases.

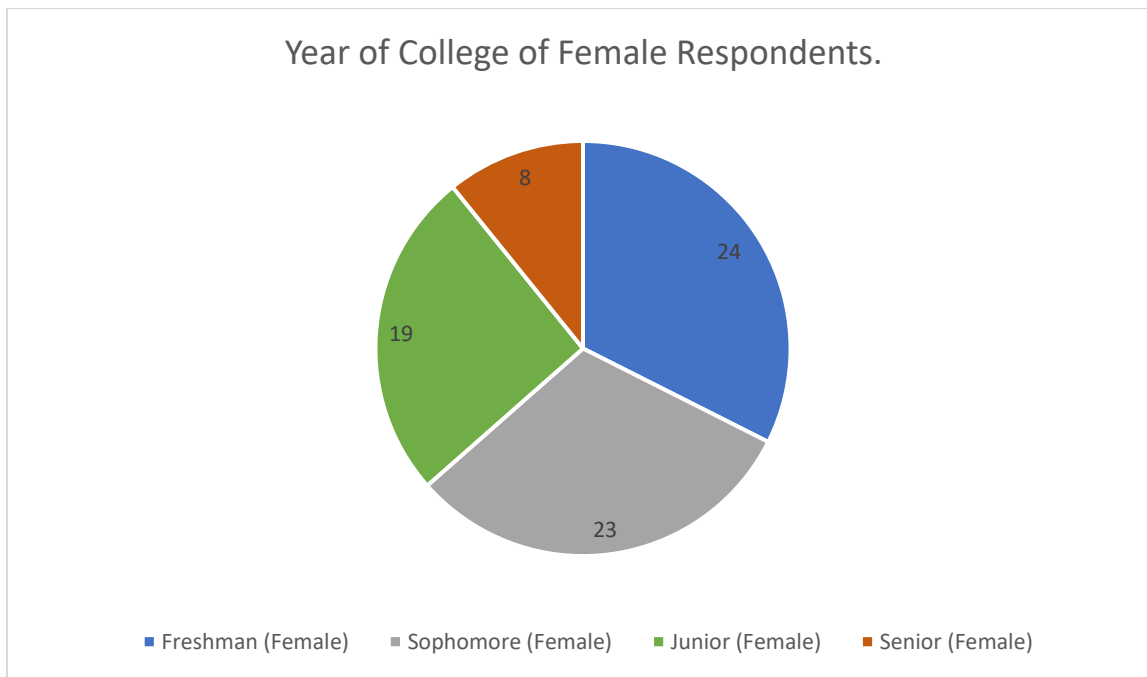
Methods: Surveys were designed using a Likert scale for the answers, as this allowed for ease of data collection and consistency for questions that require qualitative answers. All three surveys for Zika, COVID, and HIV followed roughly the same format, with the names of the diseases mentioned in the question being changed as appropriate depending on the survey. The survey instrument uses a Likert-type scale from 1 (e.g. Highly informed) to 4 (e.g. Uninformed) for answers to questions (e.g., “How informed do you feel about HIV?) except for

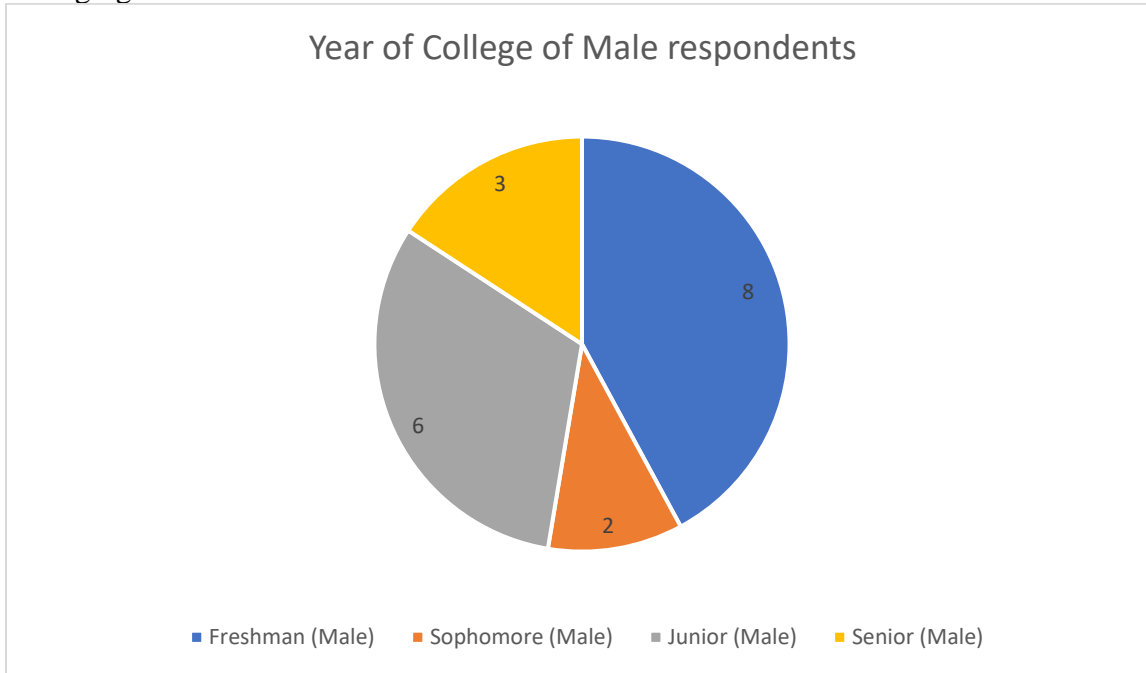
1 question on all three surveys. This 1 question was “What are your primary sources of information for learning about HIV? Choose all that apply,” which allowed multiple answers to the question for the sake of knowing the most prevalent sources of information for infectious diseases. Since the three surveys covered three different diseases, “COVID” replaced “HIV” for the COVID survey and likewise “Zika” replaced “HIV” for the Zika survey. Doing this ensured that results would be comparable to each other once compiled. After being designed, 100 paper copies of each survey were printed for later use. All surveys were performed in person at classes on BGSU campus in order to maximize response rates and total responses. These classes being Organic Chemistry II, Biochemistry, Abnormal Psychology, and Philosophy of Death and Dying. Consent was obtained from instructors before performing surveys. On the day of class agreed upon with that classes’ instructor, anonymous surveys were performed where paper copies were passed out to every student present in the classroom after a presentation discussing the details of the survey with the students. Students were asked to answer the questions throughout class before depositing their copy of the survey in a collection bin as they left. Once every student had deposited their copy of the survey into the collection bin, the survey copies were stored for later compiling.

Results: Response rates were high for all surveys with the original goal of at least 50 responses per survey being significantly exceeded. The COVID-19 survey had 94 responses out of 100 (19 male, 74 female, 1 non-binary) survey copies, the HIV survey had 70 (19 male, 46 female, 4 non-binary, 1 prefer not to say) responses, and the Zika survey had 85 responses (. Respondents were divided into separate groups based on gender as results were being compiled. As the survey regarding COVID was performed first, graphs for the results of this survey from respondents will be presented first. Respondents that identified as non-binary or selected preferred not say for the

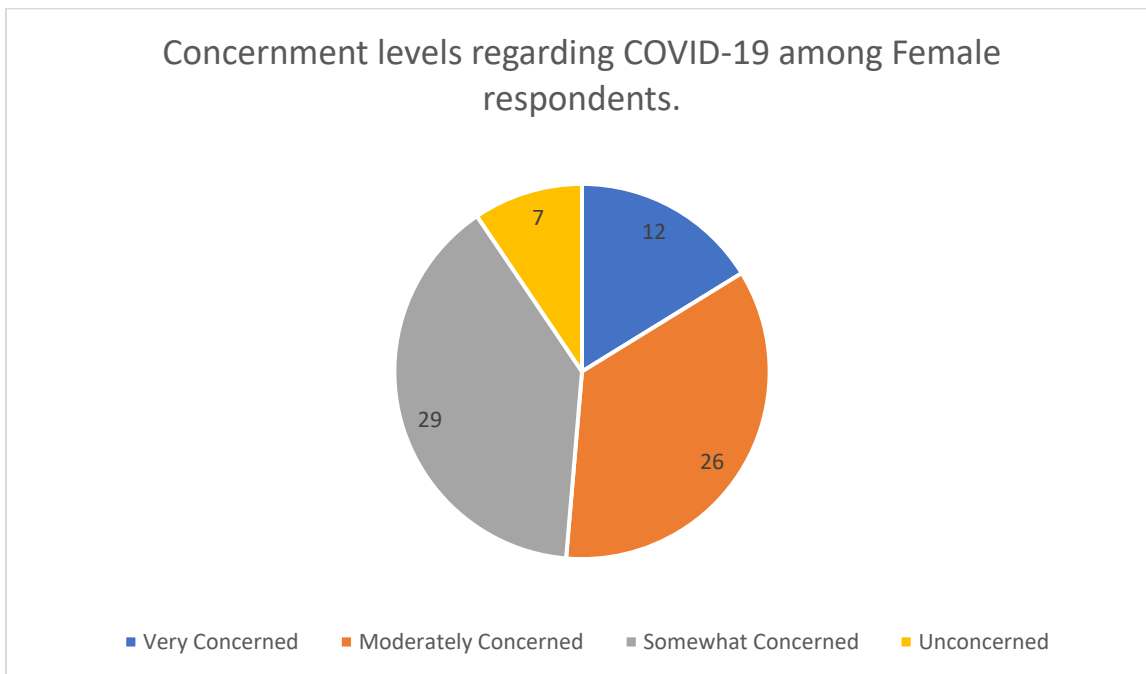
gender identity question were left out of data analysis due to the very small number of respondents of this type. Chi square tests were performed on every question that could be tested in order to determine if the responses of young adults were independent of sex. Relevant p-values and chi square values are provided under the chart for each question. Most results were not significant at the $P = 0.05$ level of significance. For results with p-values greater than 0.05, this means that there is no relation between sex and the responses of young adults to the survey questions.

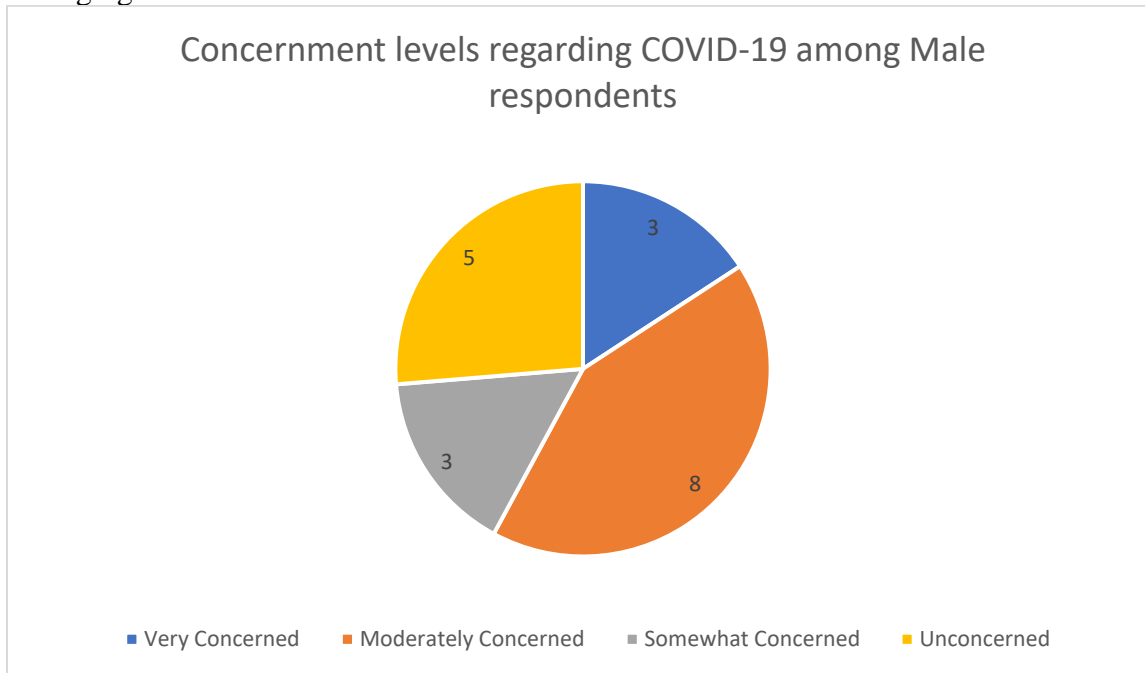
COVID 19:



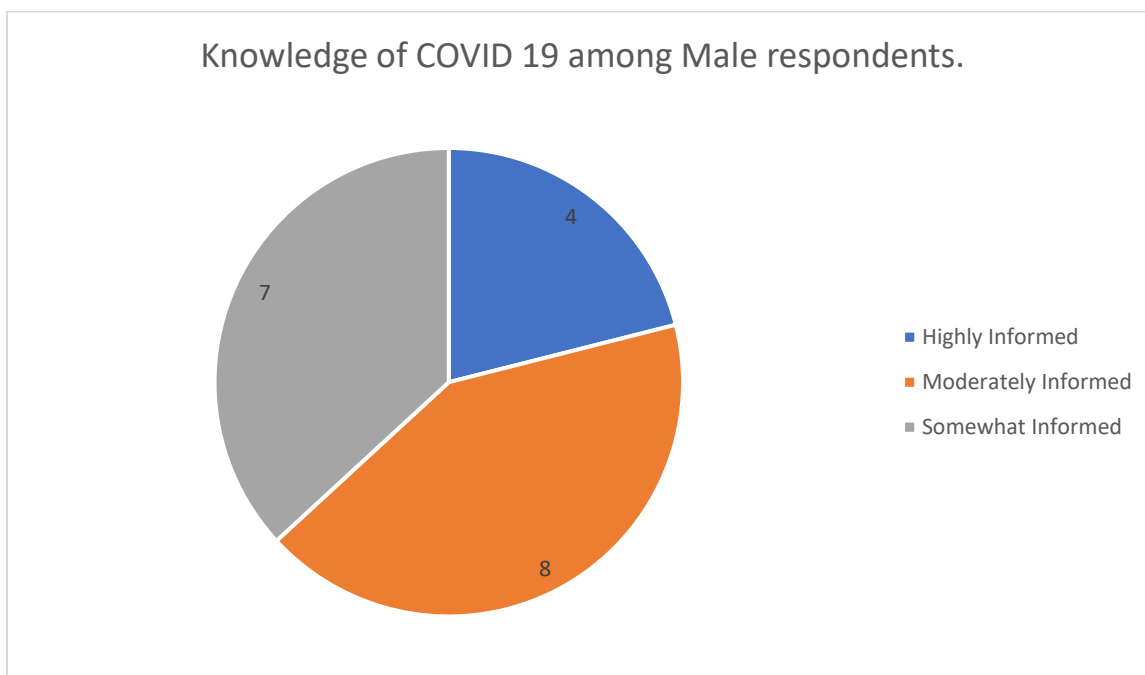


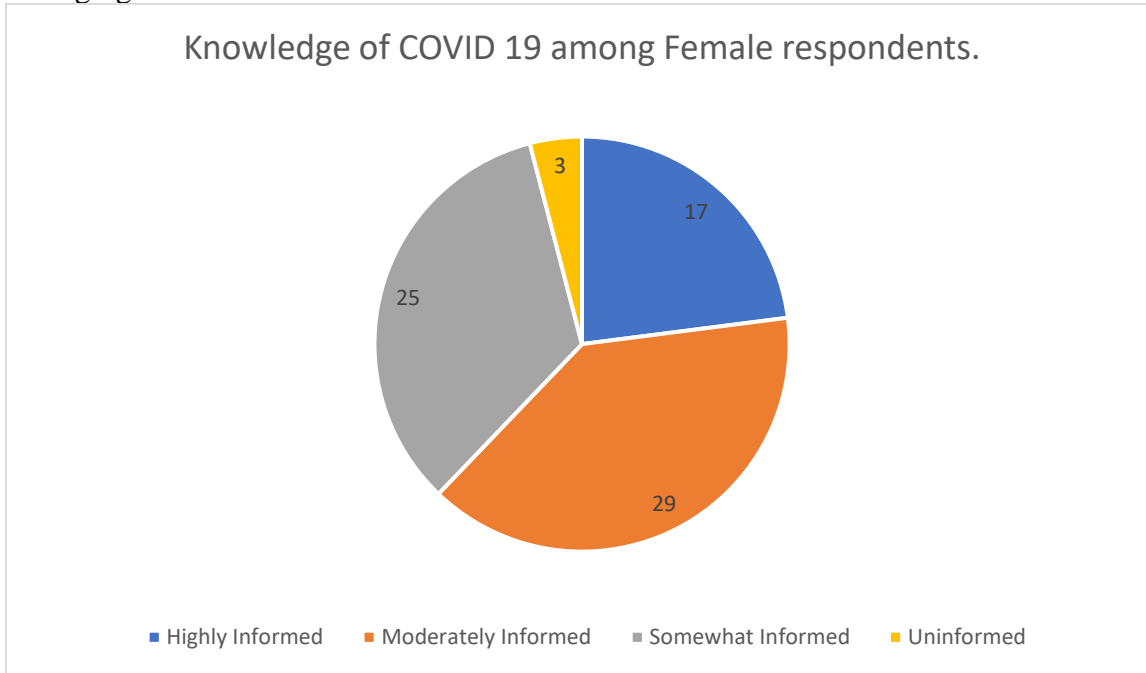
There seems to be a slightly higher proportion of male Freshman respondents compared to female Freshman respondents. No chi square value or p value taken.



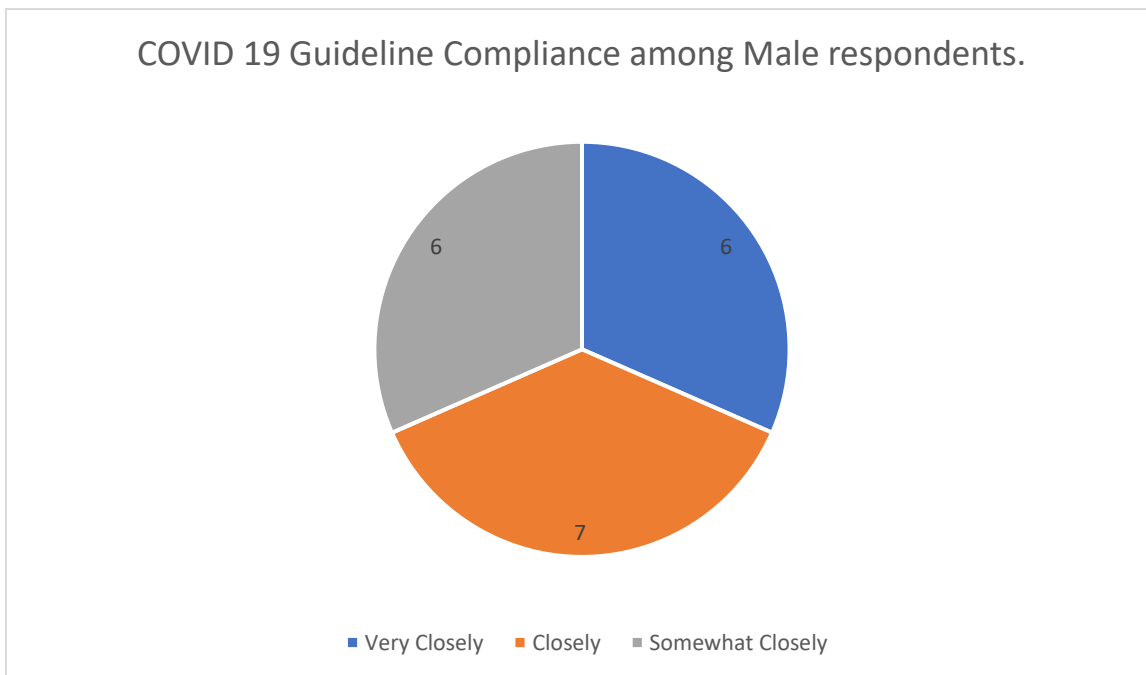


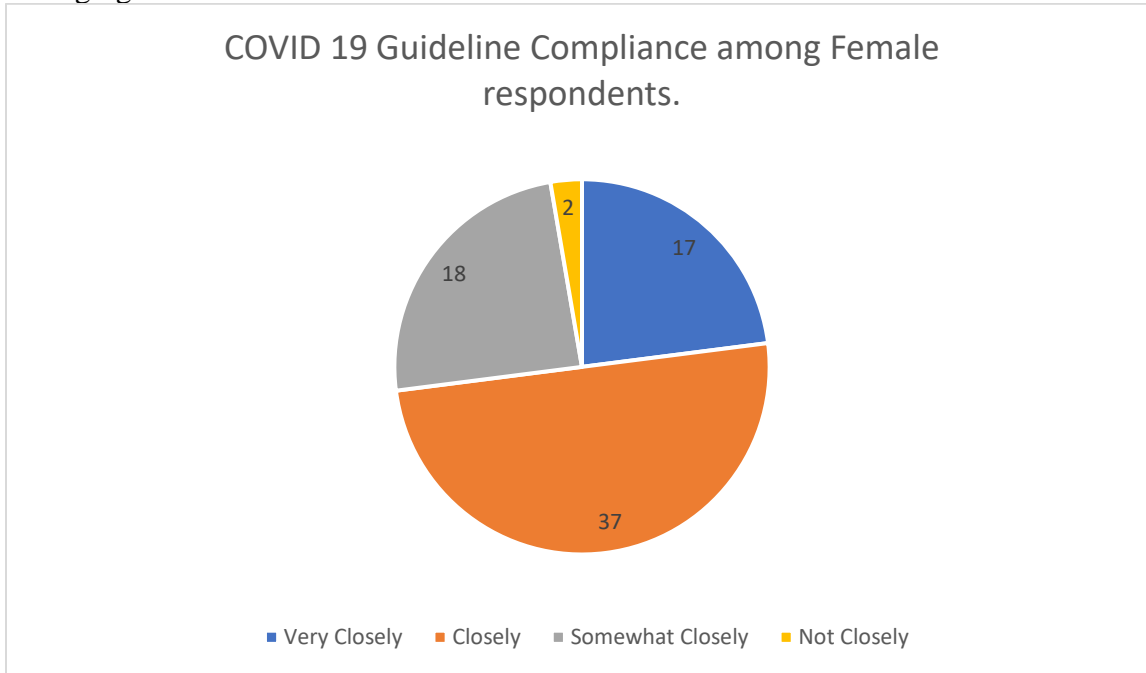
Male students appear to be generally less concerned about COVID-19 than Female students. Chi-square = 5.94 and P = 0.115.



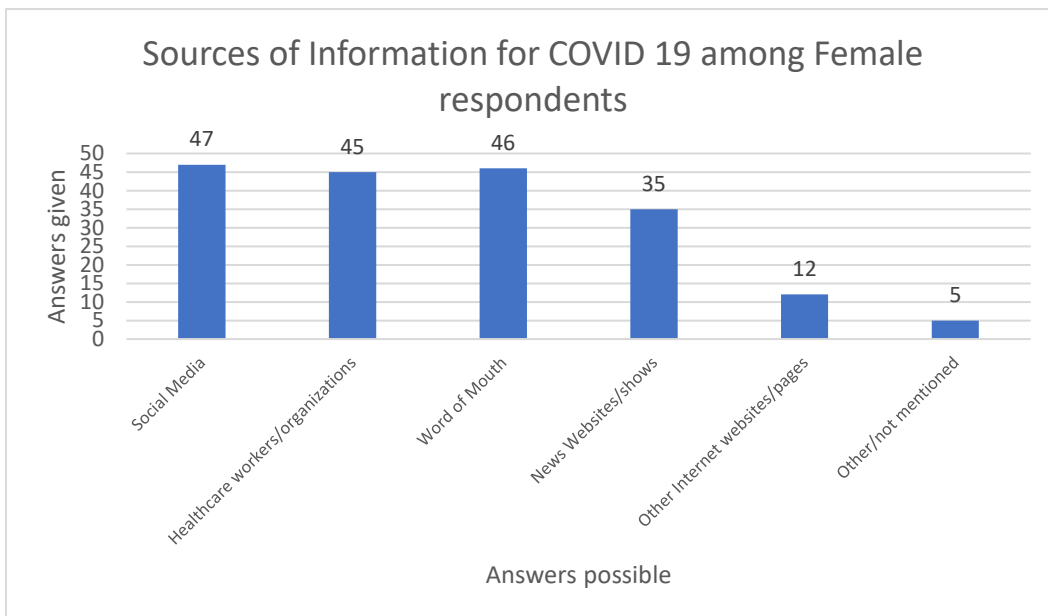


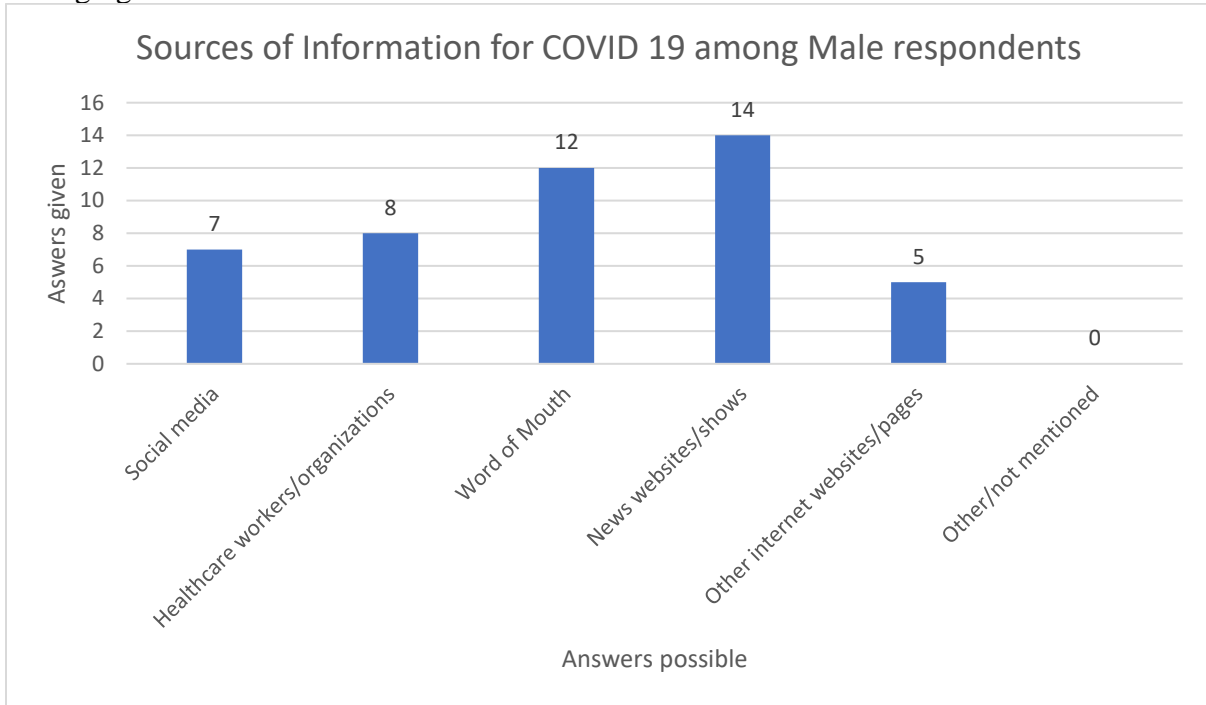
Both male and female students appear to feel just as informed about COVID-19 as each other. These results cannot be analyzed with Chi-square due to the fact that there was an answer option that no respondents chose.



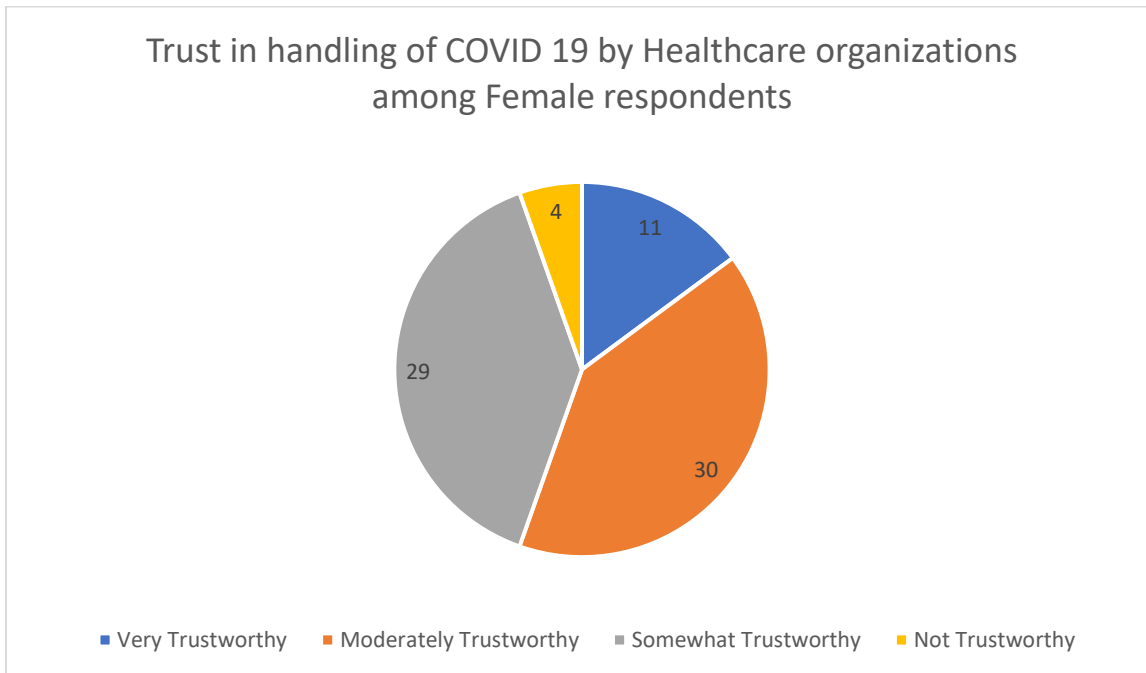


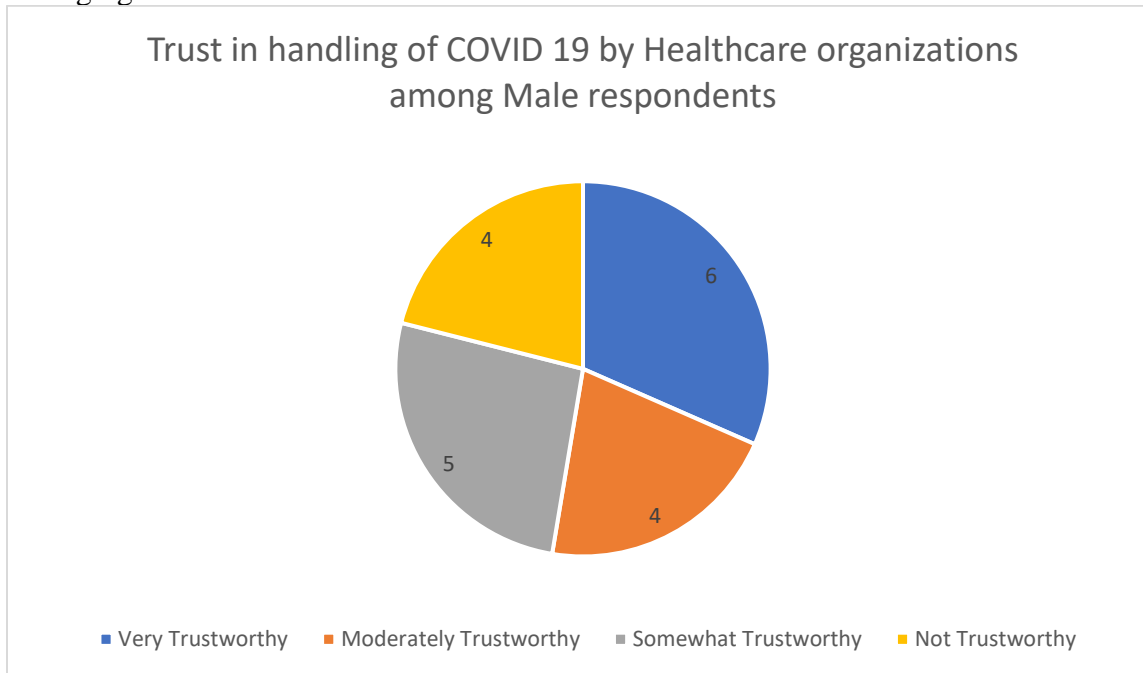
Female respondents have a significantly higher “closely” response rate than male respondents, though male respondents chose the “very closely” response at a somewhat higher proportion. Chi-square tests cannot be performed as there were answer options that no respondents chose.



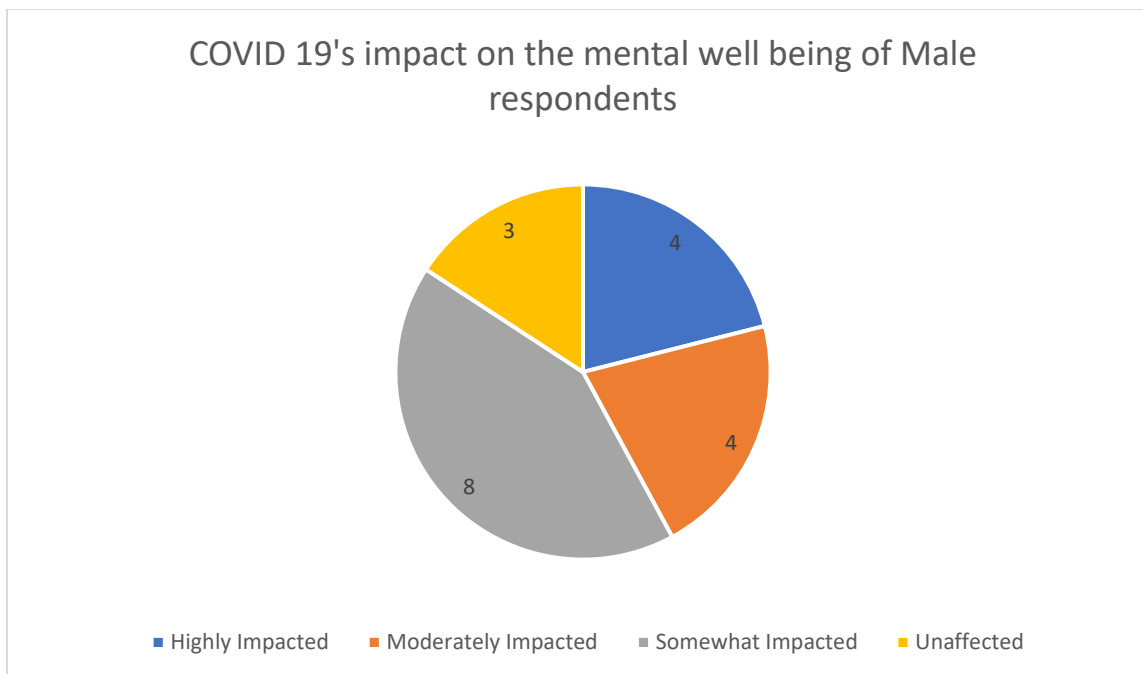
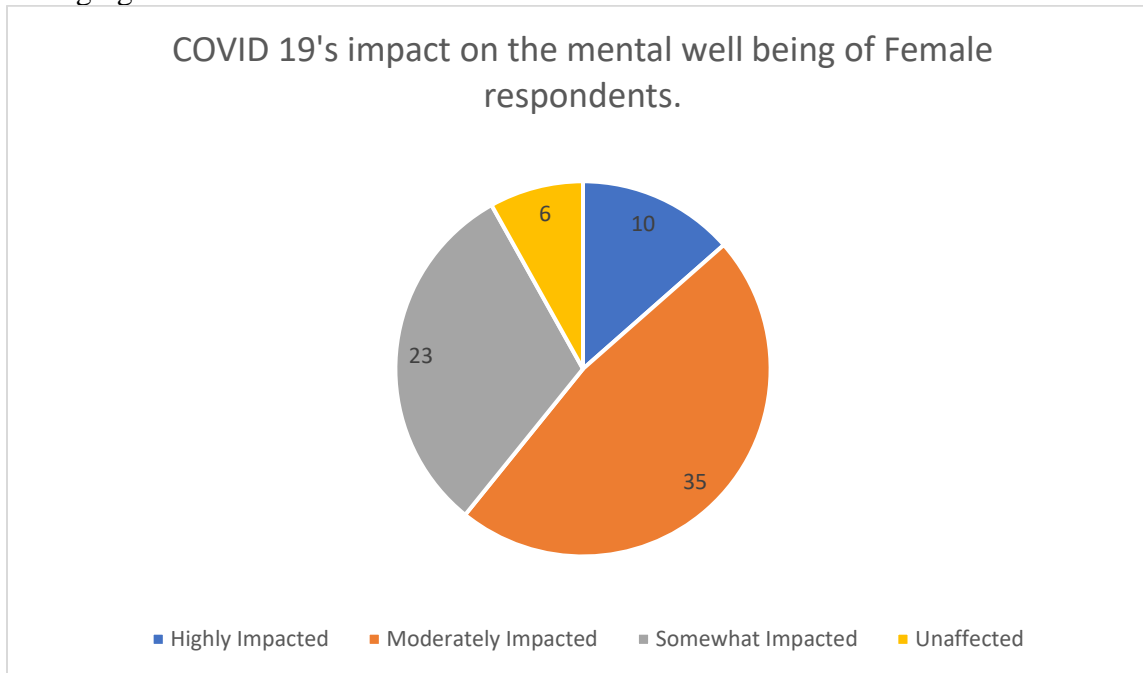


Interestingly, “social media” appears to have a plurality of responses among females, but “News websites/shows” have a plurality of responses among males. Chi-square = 5.19 and P = 0.223



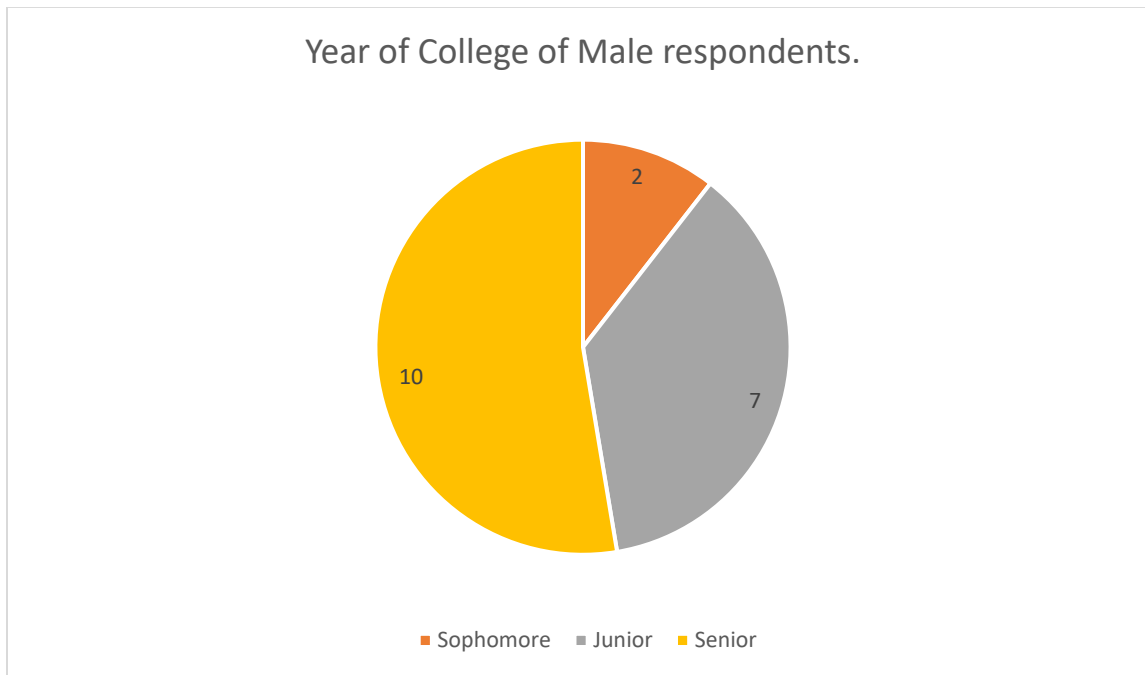
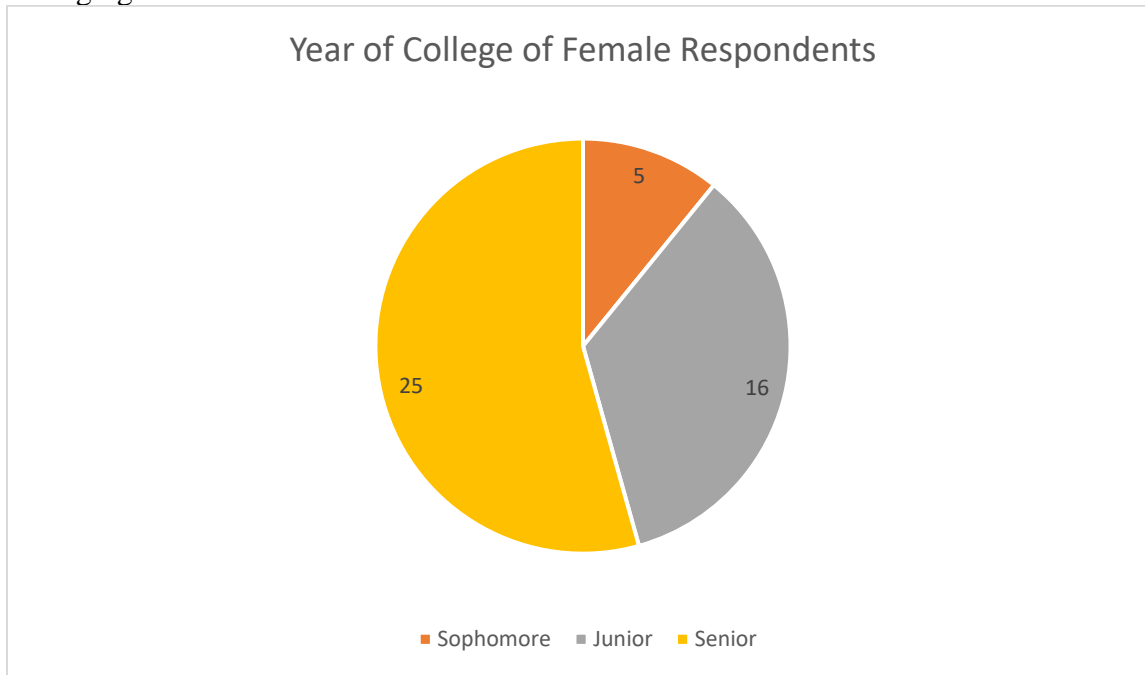


The male responses to this question seem to be much more polarized than the female responses, as a higher proportion of males chose either “not trustworthy” or “very trustworthy” compared to female responses, where “somewhat trustworthy” and “moderately trustworthy” predominate. Chi-square = 10.11 and $P = 0.0177$, which means that these results are significant at $P = 0.05$ and thus that student’s responses to the question are not independent of sex.

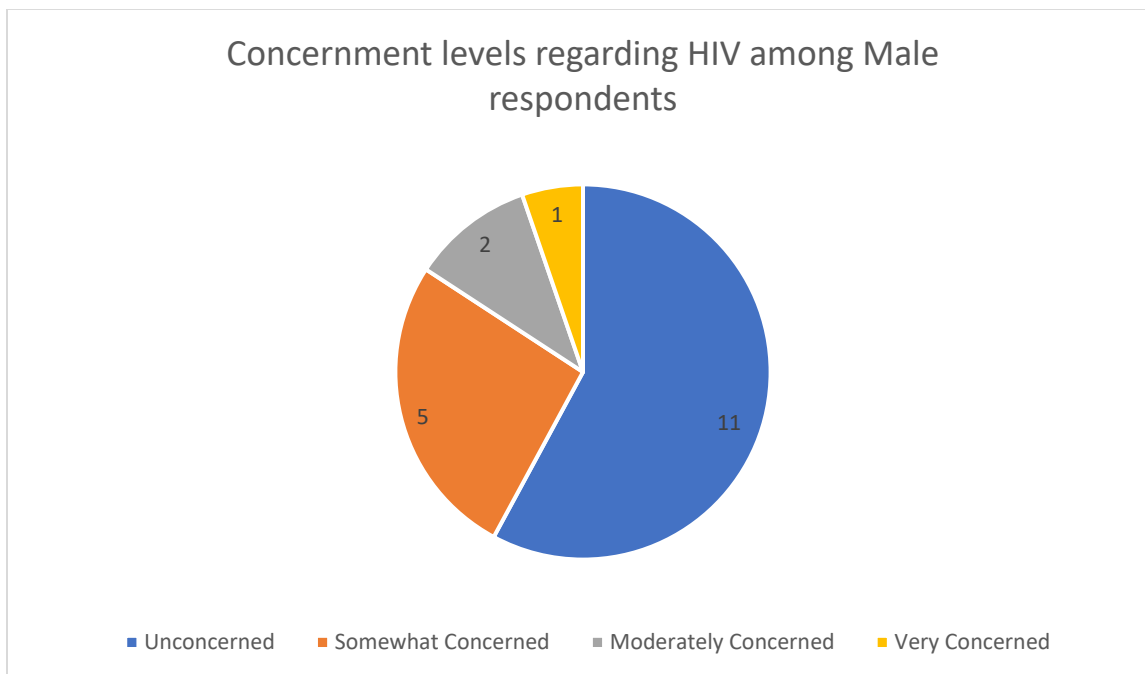
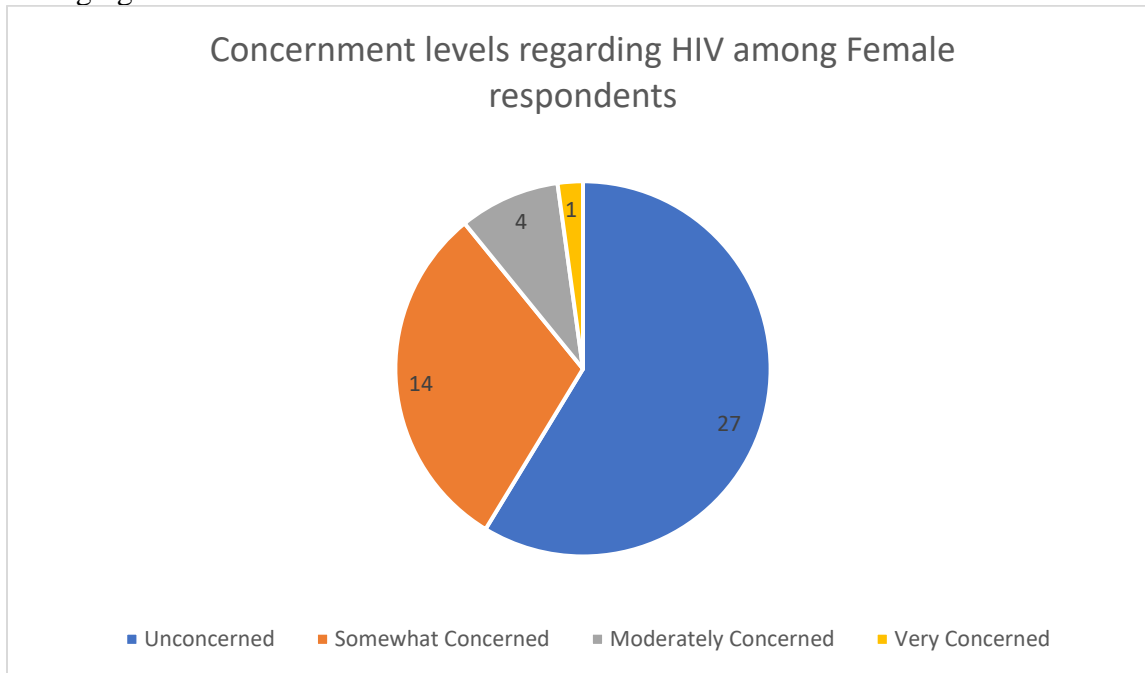


Males appear to generally report having their mental health being less affected by COVID-19 compared to females. Chi-square = 4.53 and P = 0.210

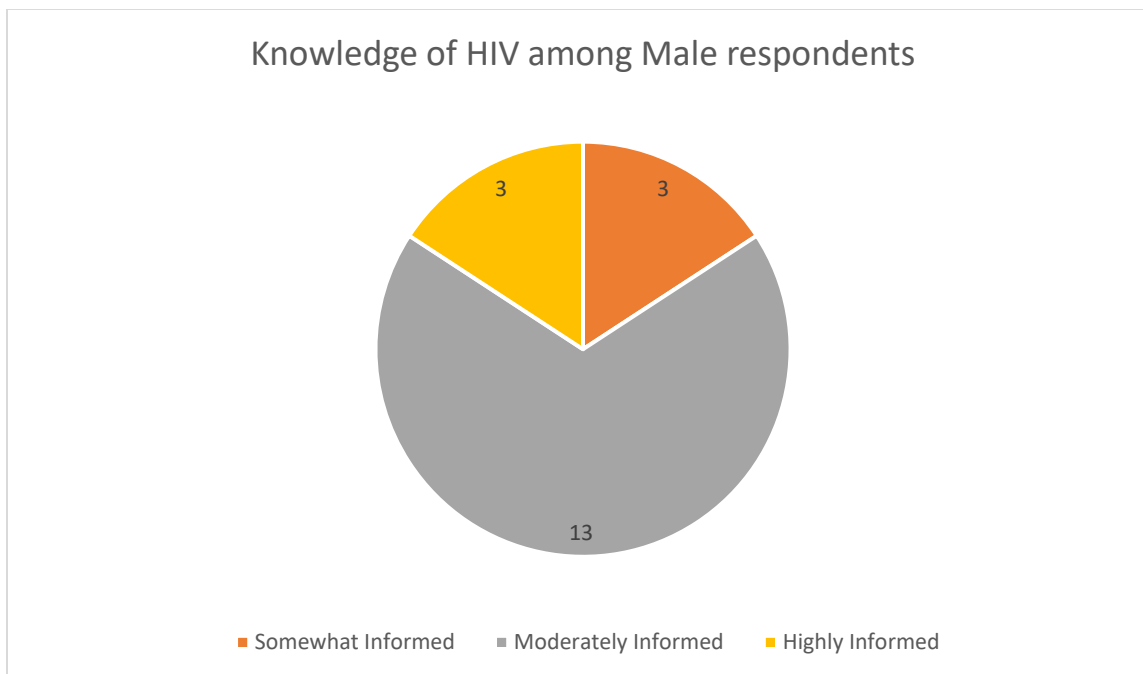
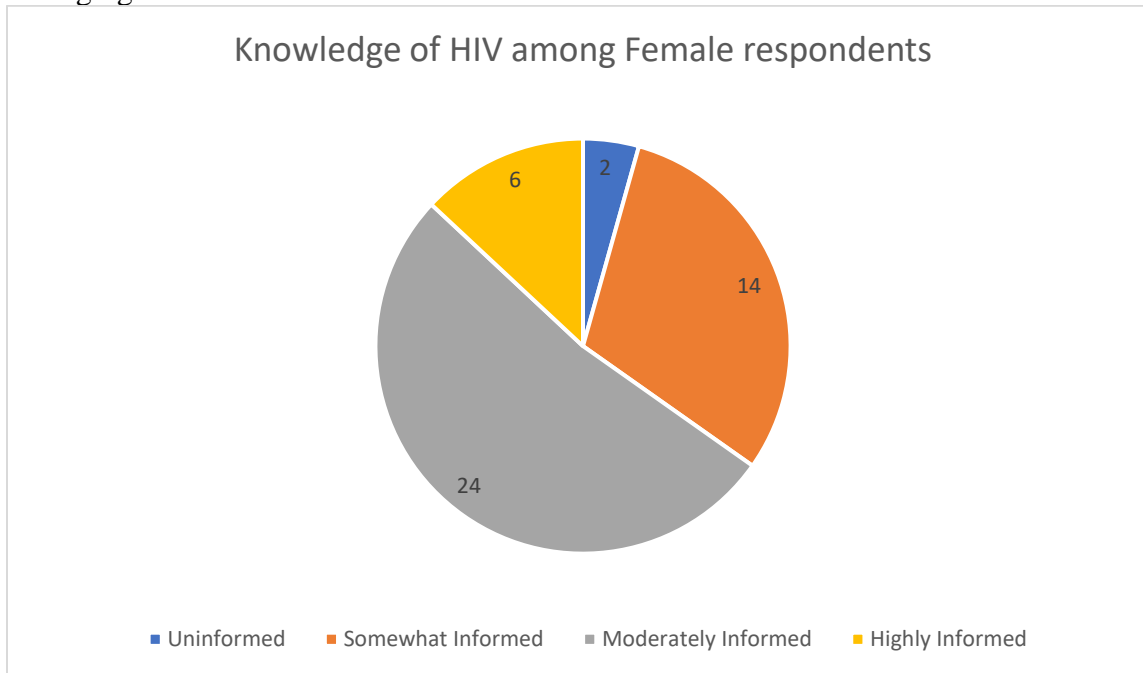
HIV:



Around the same proportion of sophomores, juniors, and seniors for both female and male respondents.

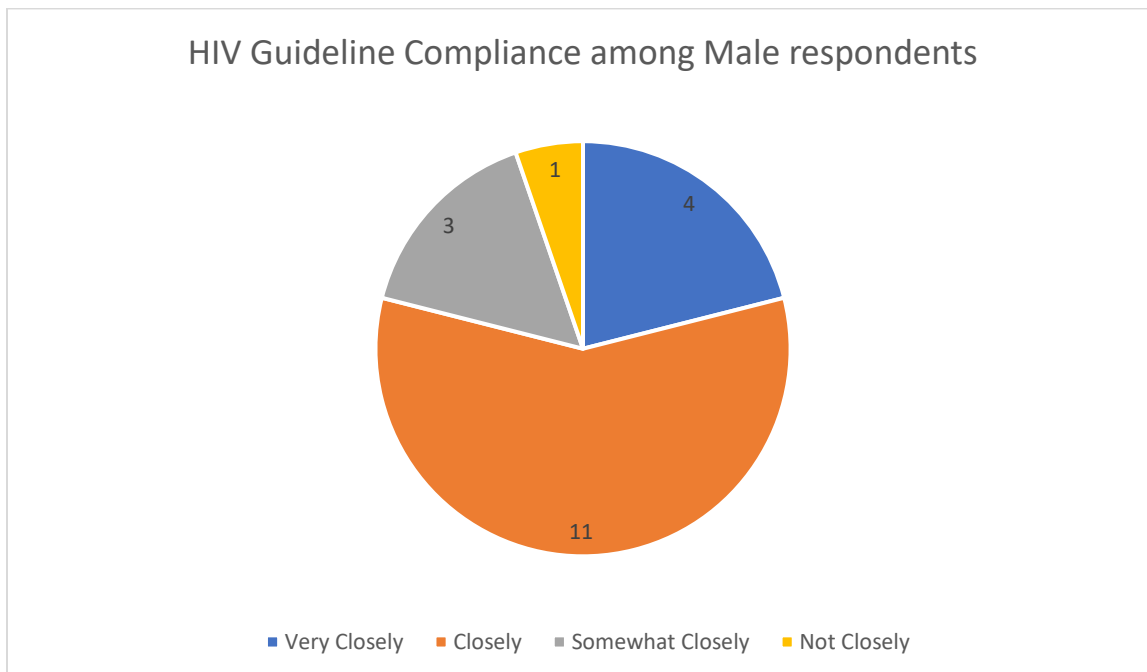
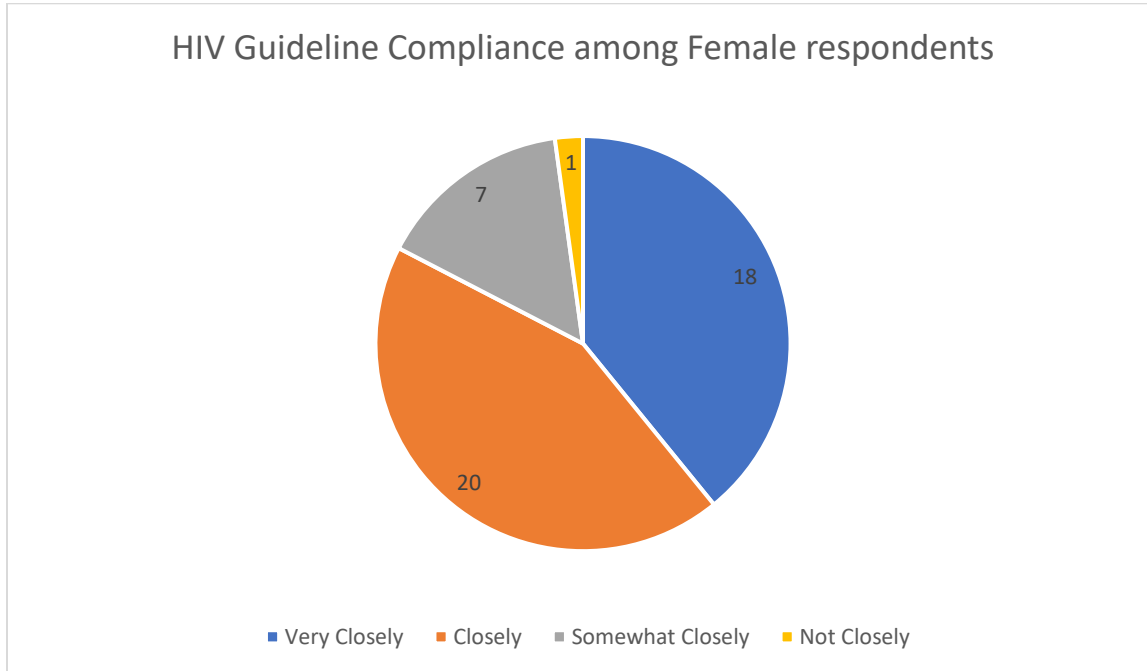


Students of both genders appear to be less concerned with HIV than with COVID-19. Chi-square = 0.545 and P = 0.909

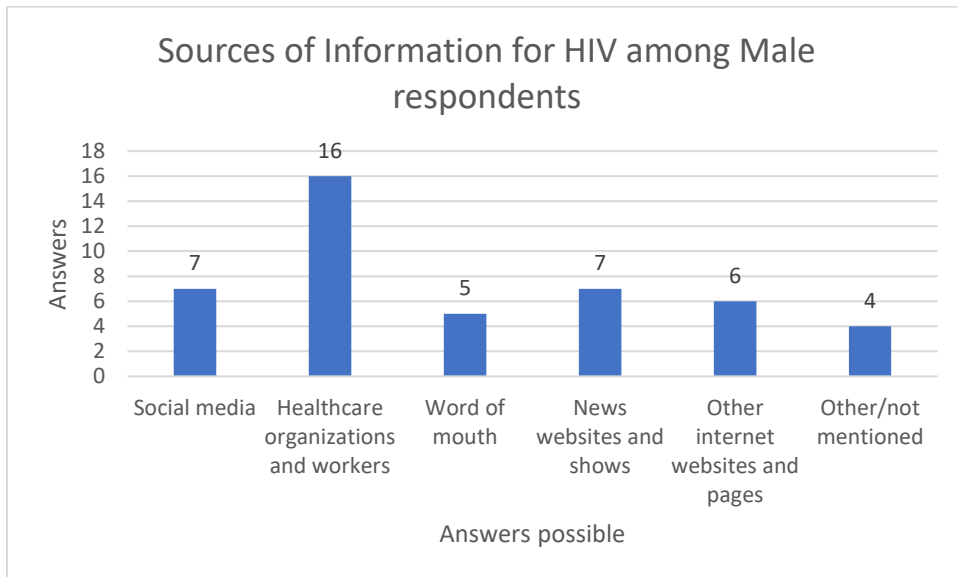
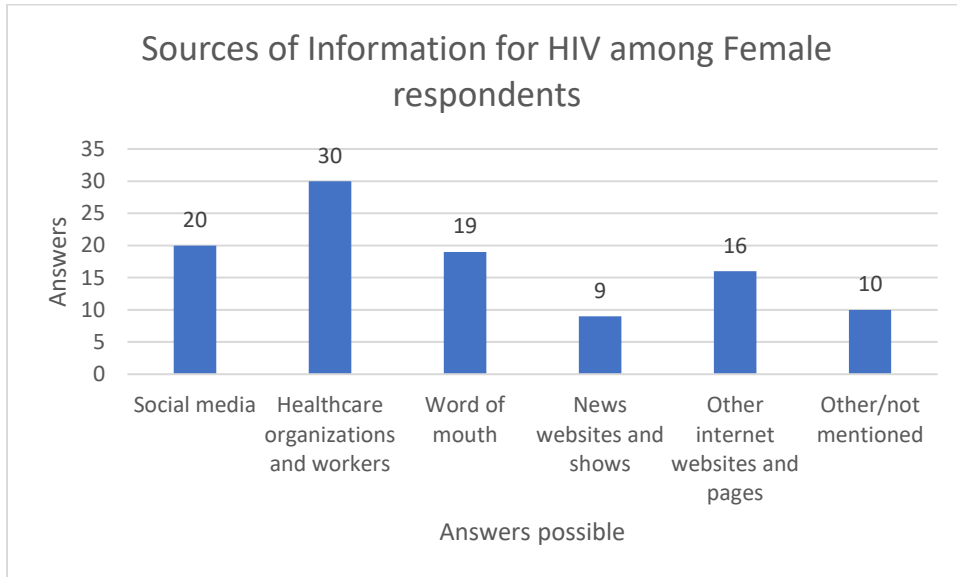


Male respondents appear to report being more informed on HIV compared to female respondents. Furthermore, less students of both genders report being “highly informed”

regarding HIV than they did for COVID-19. Chi-square test is not possible on these results as there were answers choices that no respondents chose.

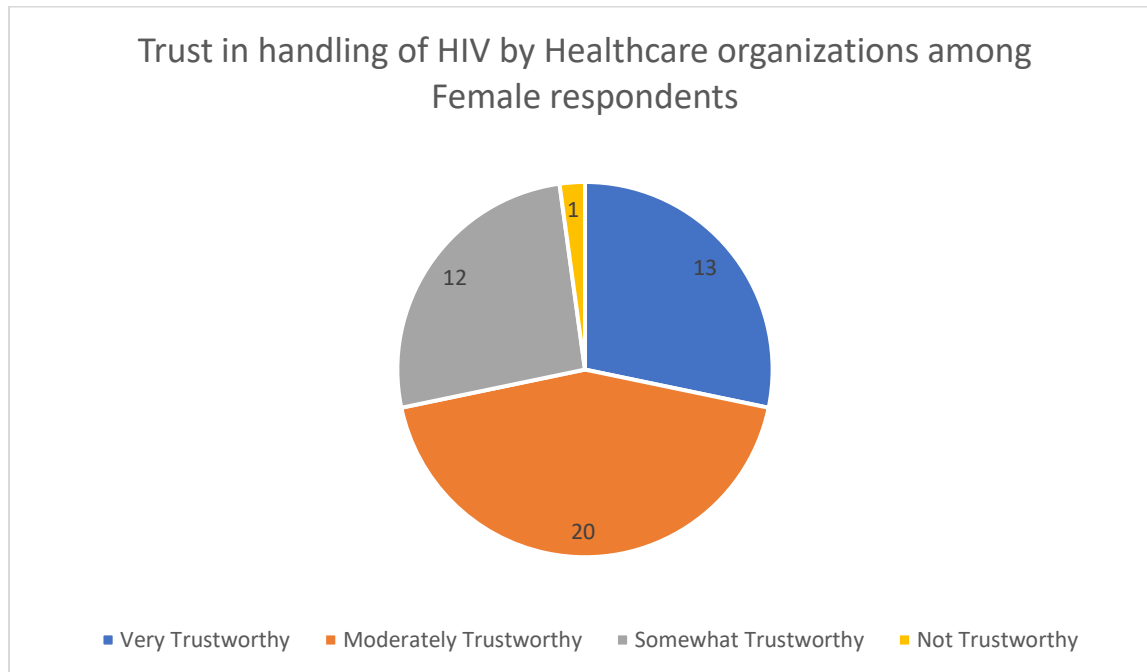


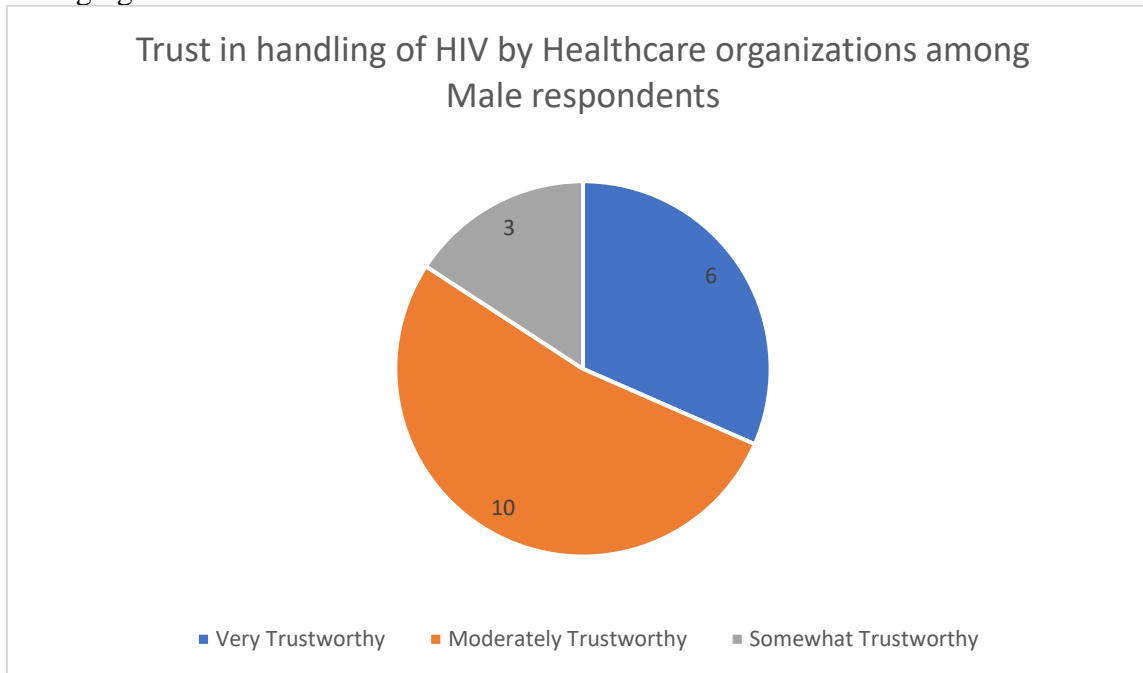
Interestingly, males appear to report following HIV guidelines less closely than females. Chi-square = 2.30 and P = 0.512. A smaller proportion of students of both genders appear to have chosen the “Somewhat closely” and “Not closely” options for HIV compared to answers for the same question in the COVID survey.



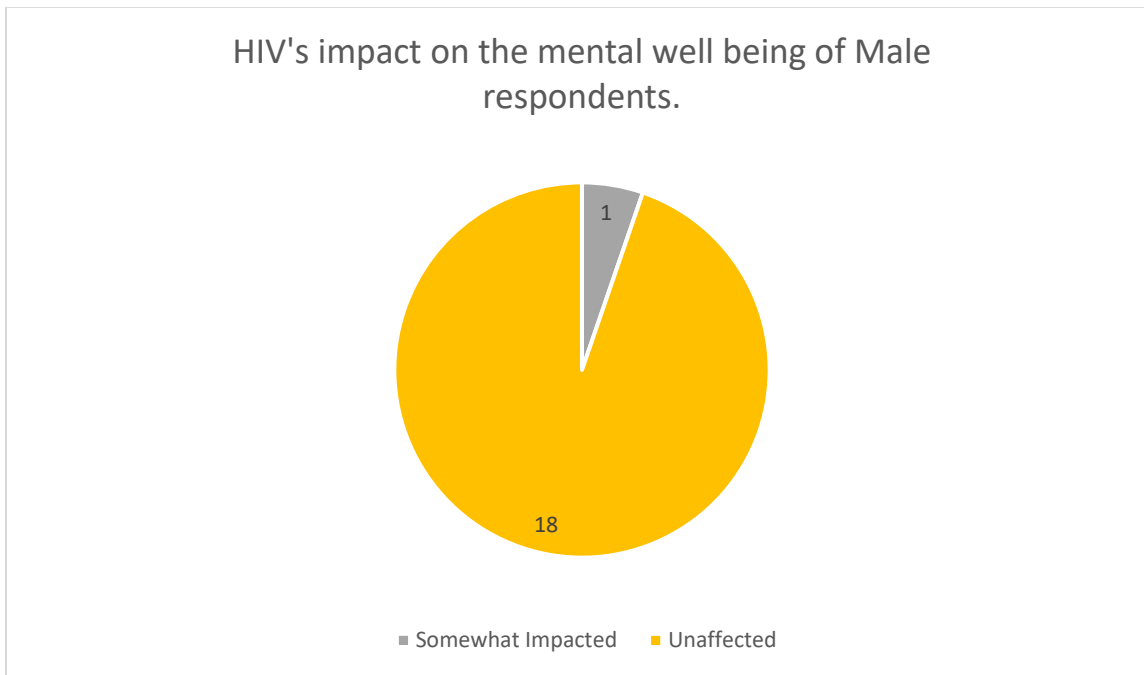
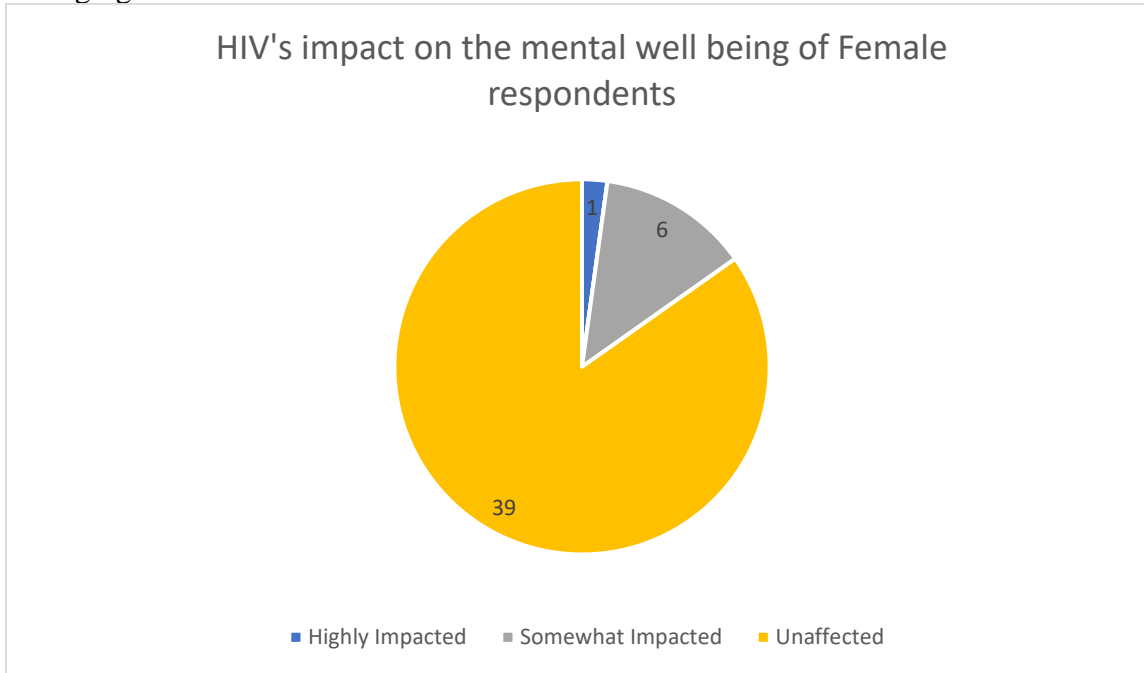
Males appear to have chosen “social media” and “word of mouth” less than females.

Interestingly, “Healthcare organizations and workers” is the predominant answer among both genders for HIV, while students chose other answers more when answering the same question in the COVID survey. Chi-square = 3.19 and P = 0.671





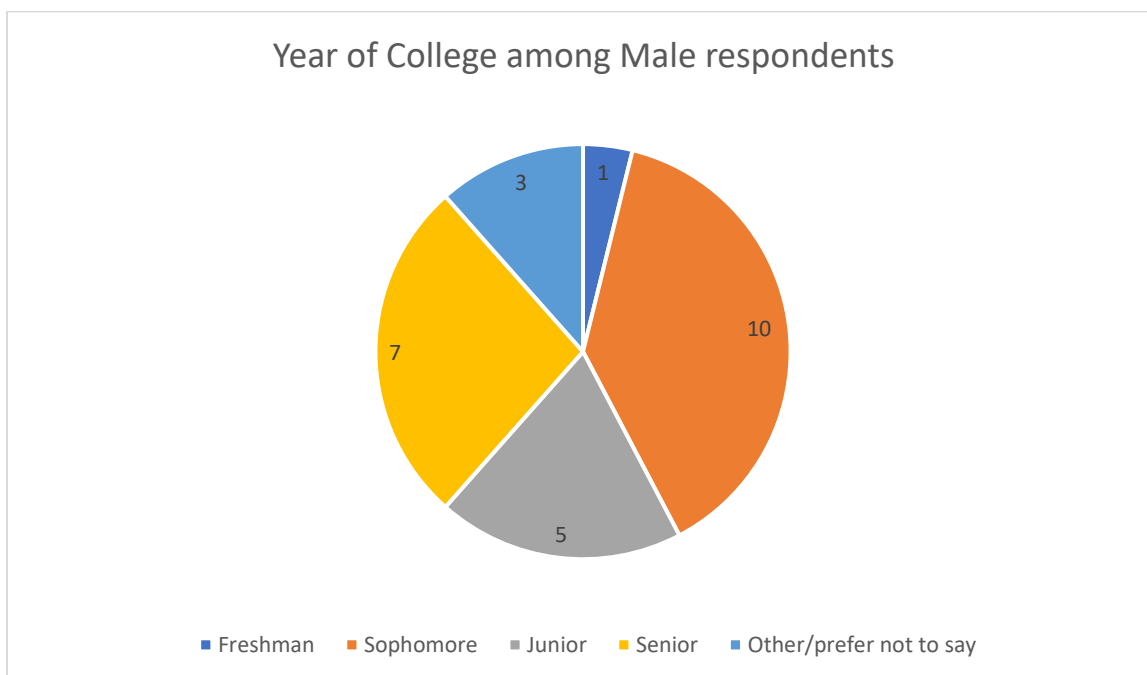
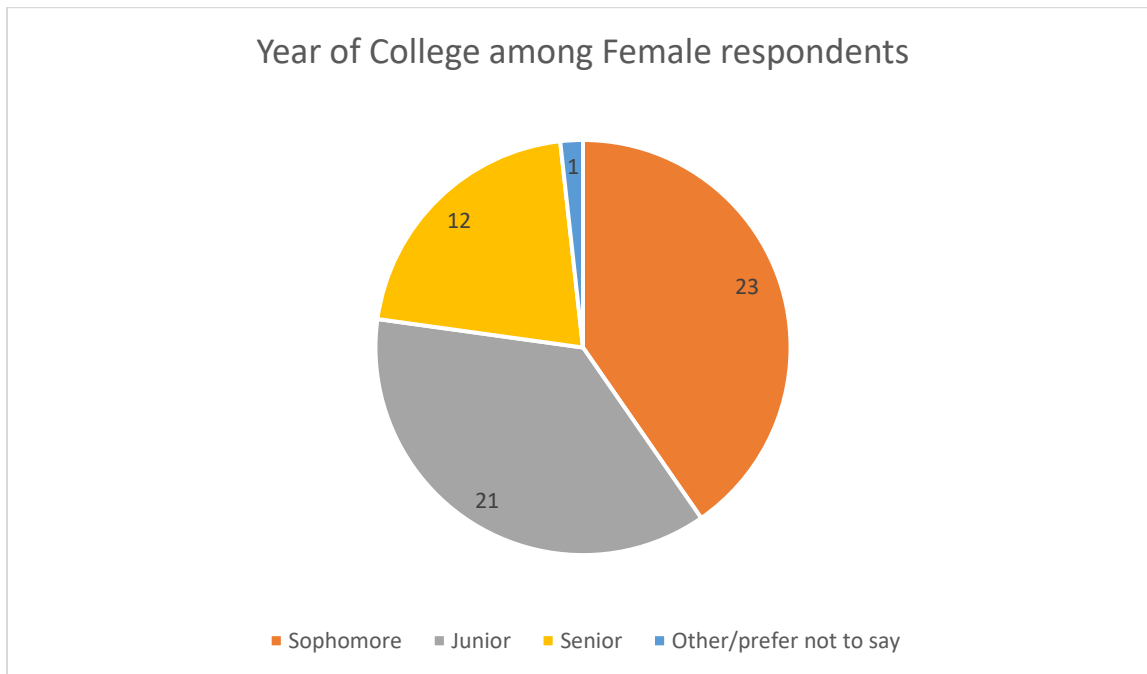
Males appear to report being more trusting of healthcare organizations than females. Overall, young adults of both genders appear to report being more trusting of how healthcare organizations have handled HIV compared to how such organizations have handled COVID-19. Chi-square tests not performed as there were answer choices that no respondents chose.



Obviously, HIV appears to have had a far less significant impact on the mental health of young adults compared to COVID, with most male and female students reporting their mental health as

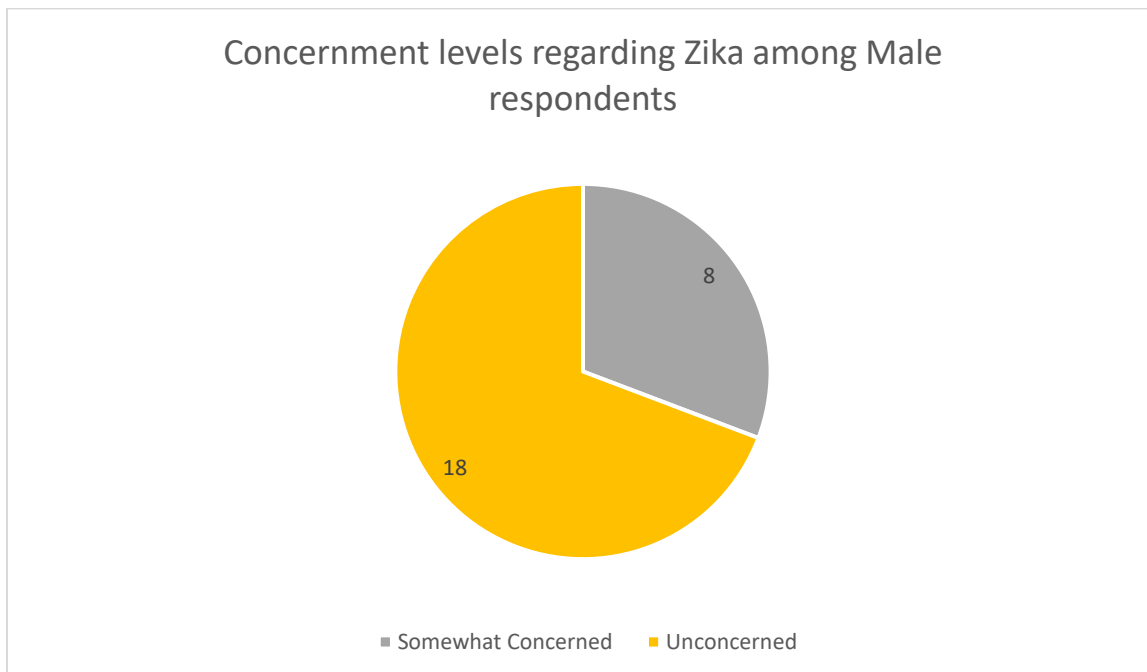
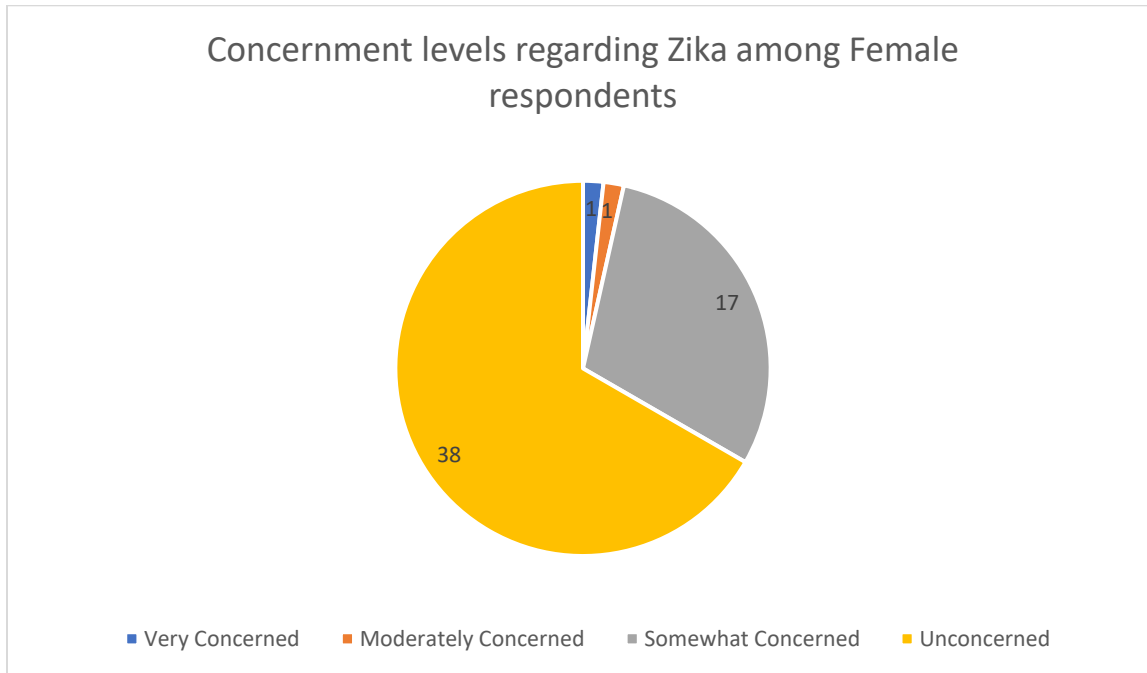
being unaffected from HIV. Chi-square tests not performed as there were answer choices that no respondents chose.

Zika:

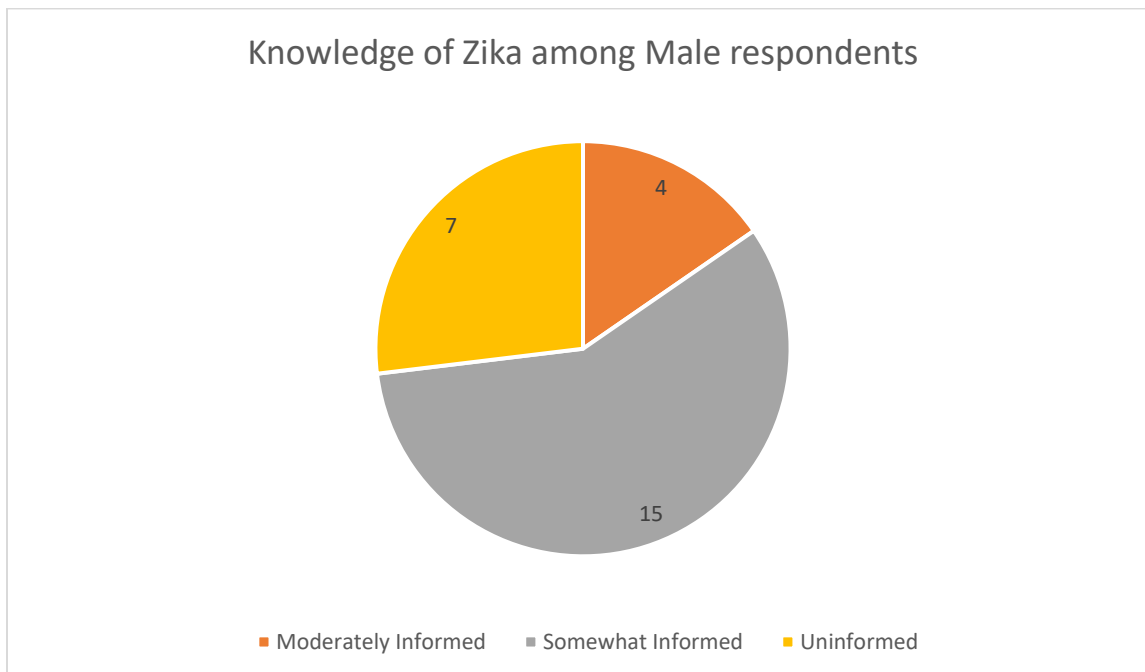
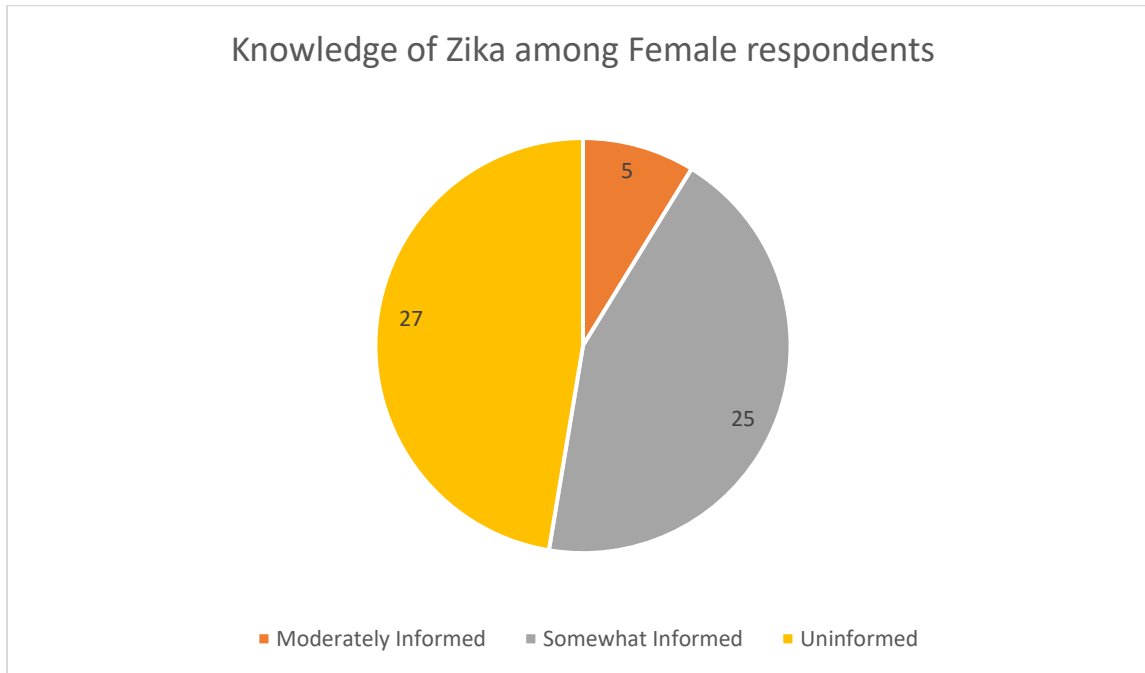


Interestingly, this is the first instance where students chose the other/prefer not to say option.

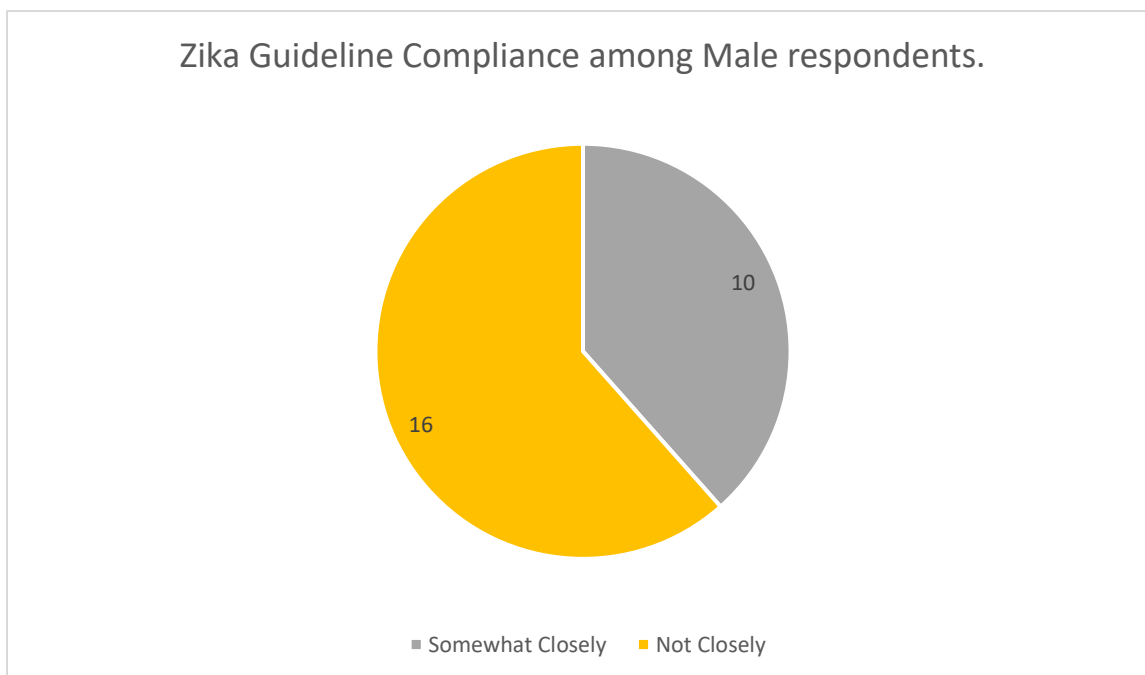
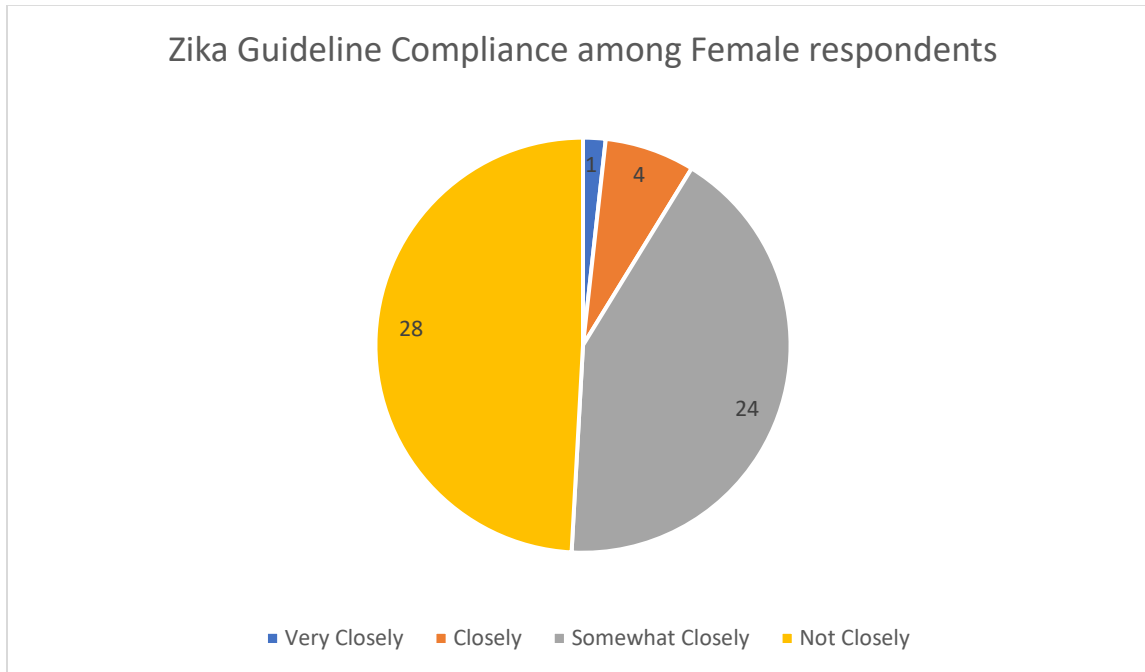
Students of every year in college are represented across both genders.



Compared to both HIV and COVID-19, young adults of both genders appear to report being even less concerned about Zika. Chi-square = 0.0002 and P = 0.9899



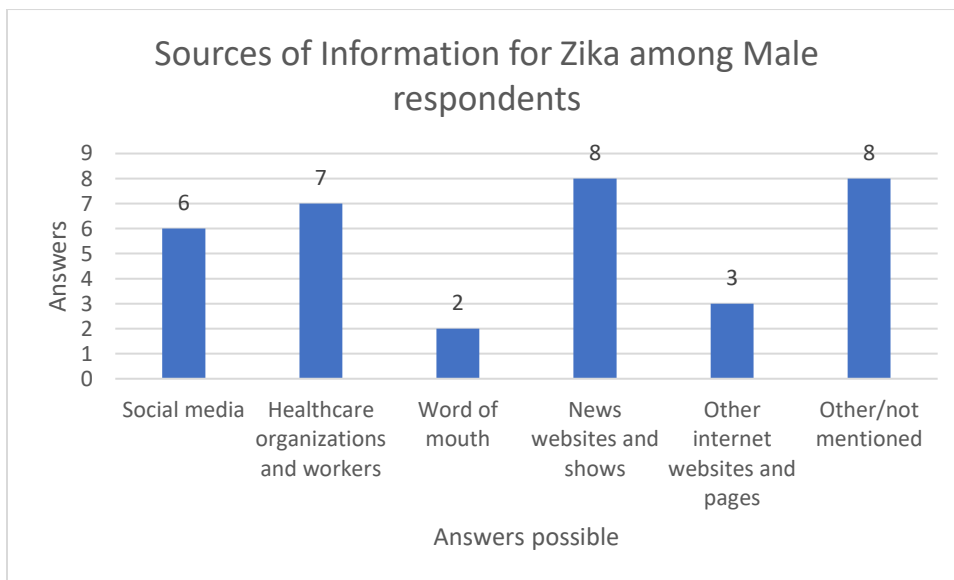
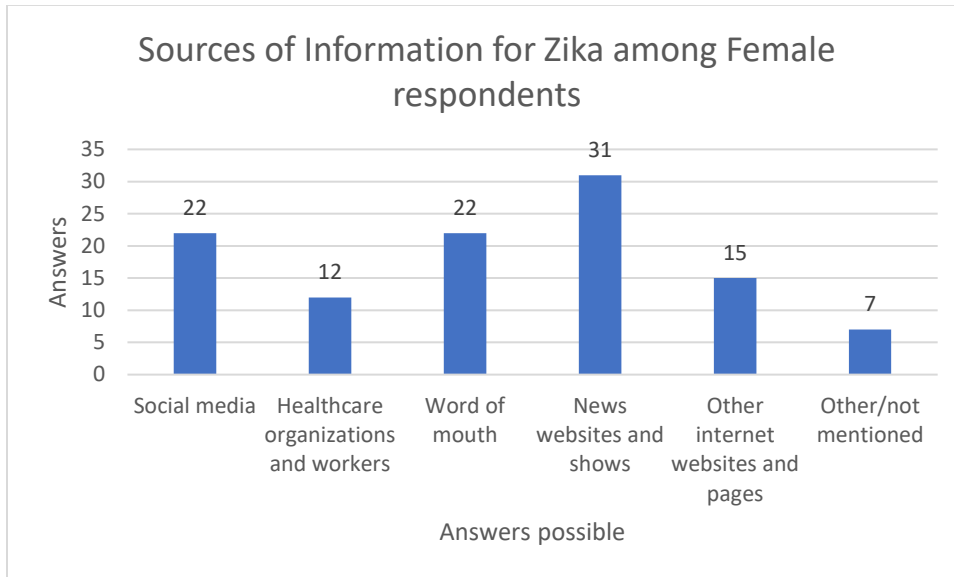
Males appear to report being more informed about Zika than females. Overall, however, young adults report being the least informed about this disease compared to COVID-19 and HIV. Chi-square = 3.25 and P = 0.197



Compared to COVID 19 and HIV, students clearly report following guidelines for Zika less

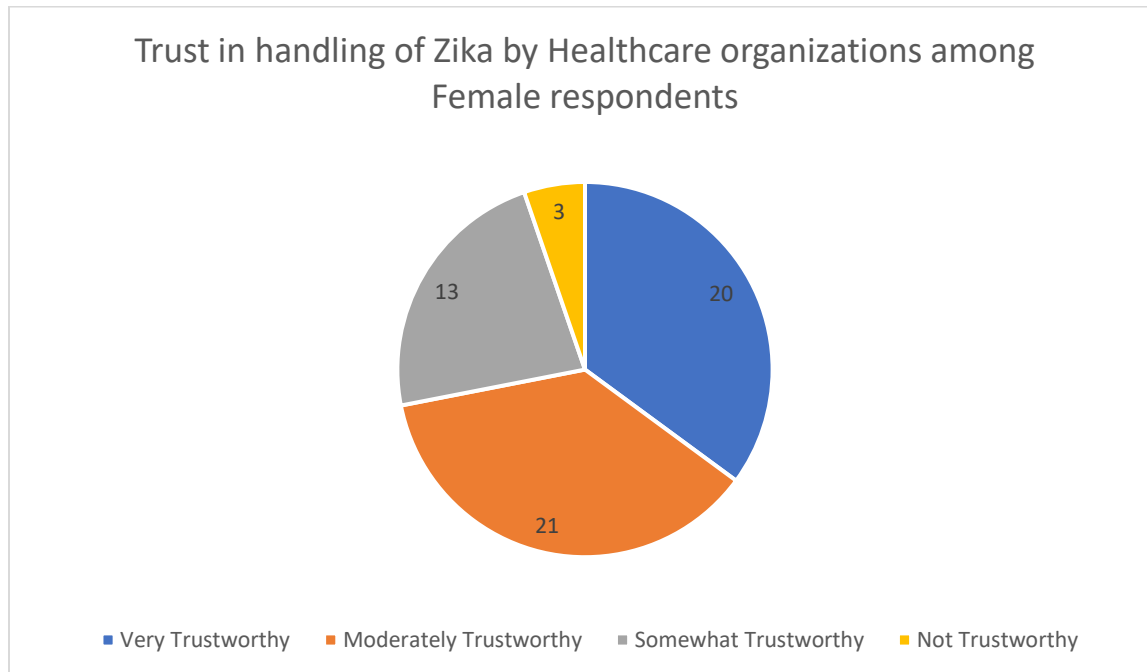
closely. Females appear to report following guidelines more closely than males, however. Chi-

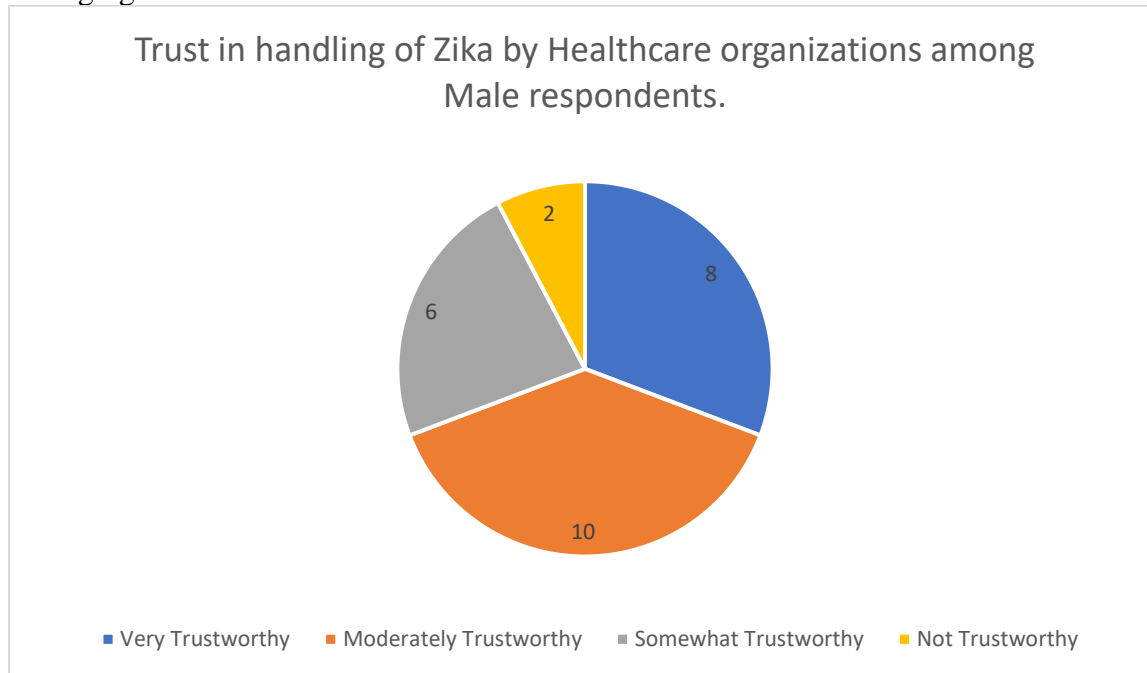
square = 0.417 and P = 0.518



Unexpectedly, “news websites and shows” appear to have been the most popular answer among both females and males. Furthermore, the “other/not mentioned” answer appeared to receive

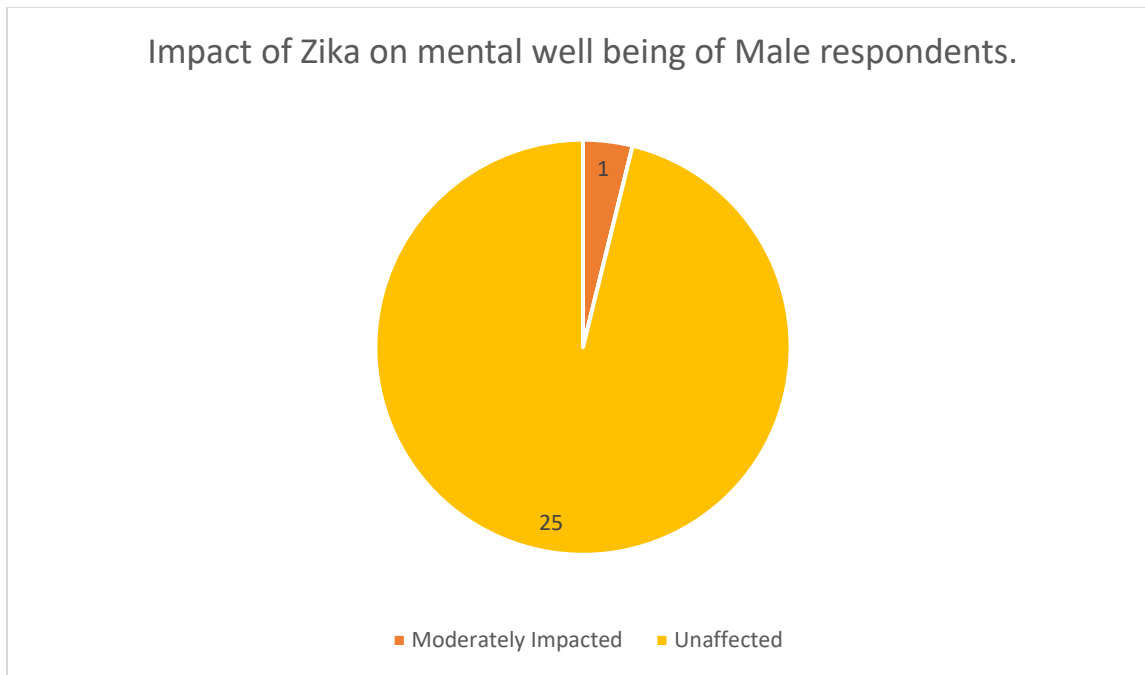
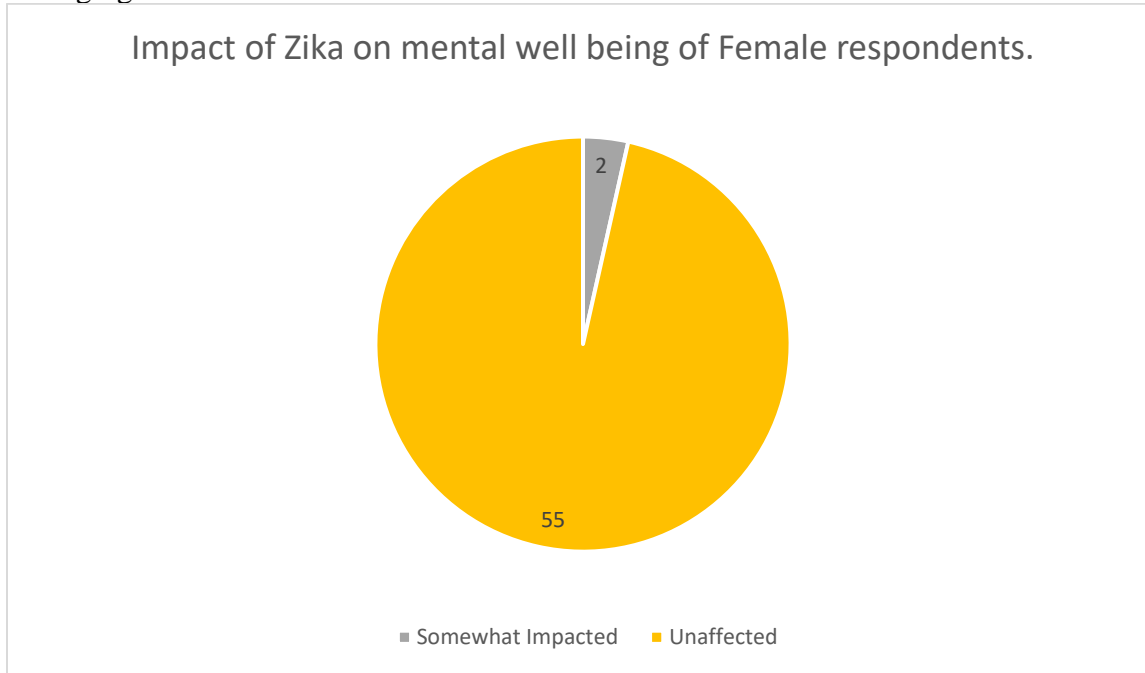
many more choices in this survey than it did in the COVID or HIV survey. Other than those two answers, there is considerable variation in how male and female young adults answered this question. Chi-square = 12.995 and $P = 0.0234$, which means that these results are significant at $P = 0.05$ and that the responses of students were not independent of sex for this question.





There appears to little difference between how males and females answered this question.

Compared to the COVID and HIV surveys, young adults appear to be more trusting of how healthcare organizations have handled Zika than they are of how such organizations have handled COVID, but not of how they have handled HIV. Chi-square = 0.287 and P = 0.963



Naturally, if students reported being less concerned and less informed with Zika, they would also likely report their mental health being less affected by Zika. There is little difference in how males and females answered this question as a whole, and it can be compared to how young

adults in the HIV survey answered mostly “unaffected” for the same question, as well. No chi-square test was performed as there were answer choices that no respondents chose.

Implications for future research and practice:

When considering the results given here, the difference in responses depending on the diseases being surveyed (e.g. COVID-19 compared to Zika) can clearly be seen. Overall, the results obtained clearly establish several trends in how young adults in the present day view viral diseases compared to the views held by prior generations. However, the surveys themselves are not without some discrepancies. The most significant possible error being the large imbalance between male and female respondents in all 3 surveys. Such a discrepancy is to be expected on a college campus where the number of female students have already eclipsed male students in number. However, the presence of such an error makes it more challenging to accurately compare the responses of young male students to young female students. Since this study was not primarily focused on gender, this discrepancy is forgivable. However, a possible future area of research could potentially be an analysis of the different ways young males and young females respond to diseases.

Regarding concernment levels from members of Generation Z surrounding the three diseases, young adults consistently displayed higher levels of concern for COVID-19 than for either Zika or HIV. Considering the large amount of media attention COVID-19 has received, this is unsurprising. COVID-19 remains the largest pandemic in the world today, with neither HIV nor Zika eclipsing the current pandemic. From this, one possible implication is that Generation Z is trend-focused, being most concerned with the current major issues of the day while seemingly smaller issues such as HIV are less noticed despite the fact that HIV did not

simply disappear from America once the COVID-19 pandemic began. Because of this, manipulating this obsession with current trends may be a useful tool in preparing Generation Z for future viral outbreaks.

For information levels from members of Generation Z concerning the three diseases, young adults of both genders felt more informed about COVID-19 than they felt about HIV, and they felt more informed about HIV than they were about Zika. Once again, this was a predictable result. If young adults are more concerned about COVID-19 than they are about HIV or Zika, then naturally they will research the most about the disease they are most concerned about. The fact that students felt more informed about HIV than Zika is unsurprising either, as HIV continues to infect more and more Americans while Zika has not been present in the United States in significant numbers for years. The trend-focused mentality of Generation Z is apparent again, as the glut of information available for COVID-19 following the hysteria surrounding the COVID-19 pandemic makes it much easier for young adults to research the Coronavirus than it possibly is to research HIV or Zika. However, the threat of students overestimating how truthfully informed they are of COVID-19 is a considerable possibility due to the amount of misinformation that has also been spread regarding the pandemic throughout the internet and in mainstream discourse. Combatting the spread of misinformation on social media platforms and in mainstream political discourse will be an important step in educating Generation Z on infectious diseases similar to COVID-19.

When analyzing guideline compliance with the three diseases, a particular interesting note is that for both HIV and COVID-19, young adults of both genders predominantly reported following guidelines “closely” and “very closely.” However, for Zika, members of Generation Z

from both genders predominantly reported following guidelines “Not closely” and “Somewhat Closely.” Several implications can be taken from this. Firstly, it is highly possible that this is due to a lack of knowledge over what the guidelines for Zika even are, as students are not going to know about the guidelines for prevention if they do not even know much about the disease in the first place. Secondly, it can also be due to the fact that since Zika does not actively threaten Americans to the same extent as HIV and COVID-19, young adults in America simply do not feel they need to obey the guidelines for preventing transmission of Zika. Meanwhile, for COVID-19 and HIV, such diseases are widespread throughout America currently, thus young adults may feel significantly less safe and take much more care protecting themselves from such diseases. Ultimately, creating clear and understandable guidelines for diseases, disseminating them as efficiently as possible throughout the population, and incentivizing individuals to follow them remain great challenges for healthcare organizations to face when preparing Generation Z for potential outbreaks.

Moving on to primary sources of information, this is easily the set of results that bears the clearest implications for the research question that has been asked. For COVID-19, social media, healthcare organizations and workers, and word of mouth dominated as the primary source of information for females, while males primarily relied on news websites, news shows, and word of mouth as their sources of information. For HIV, the dominant sources of information for both males and females were healthcare workers and organizations. Finally, for Zika, answers varied significantly between men and women. However, News websites and shows consistently appeared as the most relied on source for both genders, and several respondents also selected the other/not mentioned answer. Primarily, this shows how Generation Z’s facility with digital tools can affect how they gather information. For Zika, it is obviously not as widespread within the

United States as the other two diseases are. Thus, young adults may use more “low effort”

mediums such as news shows like CNN in order to learn more about a disease that currently does not directly affect them. For HIV and COVID-19, the predominance of social media and healthcare organizations and workers as primary sources of information show that for diseases that are currently the most relevant to their lives out of the three surveyed, they are willing to put in more effort through searching on the internet (e.g. browsing CDC.org.) in order to learn how to better protect themselves against diseases. For the future, healthcare workers will want to take advantage of more passive ways of gaining information (e.g. watching the news) in order to better inform people of lesser known diseases that still pose a threat.

With regards to how much Generation Z trusts healthcare workers and organizations, both males and female respondents had the least amount of trust in how healthcare organizations like the CDC have handled COVID-19. Primarily, this is likely due to the glut of misinformation that has been mixed with true information online and in media, as well as how severely COVID-19 has affected everyday life due to causing drastic measures to be taken in order to slow the spread of the disease, such as quarantine. As such, young adults likely feel disenfranchised due to the effects of COVID-19 on their lives in various aspects (e.g. socially), as well as simply not knowing which sources to trust when there is a great deal of information to filter in order to find the truth. Healthcare workers and organizations will likely need to not only be ready to solve a viral outbreak at hand, but also to help alleviate the concerns that people may have about how their lives will be changed so that relations between the public and healthcare workers remain amicable.

Finally, young adult respondents of both genders widely reported their mental well-being being impacted by the COVID-19 pandemic, but typically not at all by HIV or Zika. Obviously, there was no quarantine for HIV or Zika in America over the past 10 years, thus this implies that the social isolation and general cultural upheaval that COVID-19 has brought causes distress in young adults. With the onset of the digital era years ago, Generation Z was left with one option for socialization once quarantines were in effect: the internet. Being no replacement for face-to-face interaction with friends, family, and loved ones, many young adults thus suffered from deteriorating mental health due to loneliness and “cabin fever.” In the future, healthcare professionals will likely need to provide guidelines for how to maintain a social life whilst in the midst of a pandemic in order to mitigate the effects that viral outbreaks can have on a person’s mental health.

Conclusion:

In conclusion, this project has sought to discover how exactly Generation Z is distinct in its outlook on viral diseases such as HIV, Zika, and COVID-19. In doing so, it has found that Generation Z may have advanced in some ways regarding its ability to prepare itself for diseases (e.g. much more experience with technology), it has regressed in others (e.g. more susceptible to mental illness than previous generations.) Ultimately, this project serves to educate health professionals on how members of Generation Z can best be educated and prepared for future Viral outbreaks so that such diseases can best be combatted. However, in the future, possible areas for study may include conducting the same surveys among Baby Boomers, only men, or only women, among others.

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